

Page 150 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6944	16922	27013	1.53	1.0E-06	AI287878.1	EST_HUMAN	q123f06.x1 NCI_CGAP_Lym6 Homo sapiens cDNA clone IMAGE:1982435 3' similar to contains element
7582	17433	27647	3.72	1.0E-06	U82668.1	NT	MIR repetitive element ;
7582	17433	27648	3.72	1.0E-06	U82668.1	NT	Homo sapiens shox gene, alternatively spliced products, complete cds
7609	17460	27676	4.86	1.0E-06	AA132611.1	EST_HUMAN	Homo sapiens shox gene, alternatively spliced products, complete cds
7637	17488		3.73	1.0E-06	AA449257.1	EST_HUMAN	z04d11.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:587174 5'
7989	17839		1.52	1.0E-06	AL163203.2	NT	gbD26129 RIBONUCLEASE PANCREATIC PRECURSOR (HUMAN);
8912	18720		4.81	1.0E-06	AW890941.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003
9440	19077	25280	2.99	1.0E-06	L78810.1	NT	RC4-NT0054-120500-012-b03 NT0054 Homo sapiens cDNA
9536	11844	21729	1.84	1.0E-06	AF184614.1	NT	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
9536	11844	21730	1.84	1.0E-06	AF184614.1	NT	Homo sapiens p47-phox (NCF1) gene, complete cds
357	10314	20134	1.49	9.0E-07	AF003529.1	NT	Homo sapiens p47-phox (NCF1) gene, complete cds
357	10314	20135	1.49	9.0E-07	AF003529.1	NT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
8572	18440	28708	2.38	9.0E-07	AL163281.2	NT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
4661	14547	24336	4.49	8.0E-07	AI288596.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C081
4661	14547	24337	4.49	8.0E-07	AI288596.1	EST_HUMAN	q182g07.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:1878876 3'
5589	15504		7.45	8.0E-07	P21414	SWISSPROT	q182g07.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:1878876 3'
8667	16547		7.89	8.0E-07	AF135416.1	NT	POLYPROTEIN [CONTAINS: PROTEASE; REVERSE TRANSCRIPTASE; ENDONUCLEASE]
8903	18703		7.2	8.0E-07	T07770.1	EST_HUMAN	Homo sapiens UDP-glucuronosyltransferase gene, complete cds
9055	18838		4.15	8.0E-07	AL163280.2	NT	EST05660 Fetal brain, Stragene (cat#336206) Homo sapiens cDNA clone HFBEN89
1822	11719	21599	0.94	7.0E-07	AF167341.1	NT	Homo sapiens chromosome 21 segment HS21C080
1870	11766	21641	2.36	6.0E-07	AW855558.1	EST_HUMAN	Homo sapiens membrane interleukin 1 receptor accessory protein (IL1RAP) gene, exons 10 and 11
2442	12319	22217	2.41	6.0E-07	AF019413.1	NT	CM3-CT0277-221099-024-e11 CT0277 Homo sapiens cDNA
3891	13802		1.65	6.0E-07	P41479	SWISSPROT	Homo sapiens HLA class III region containing tenascin X (tenascin-X) gene, partial cds; cytochrome P450 21-hydroxylase (CYP21B), complement component C4 (C4B) G11, helicase (SK12W), RD, complement factor B (Bf), and complement component C2 (C2) genes, >
7279	17156	27351	1.35	6.0E-07	BF001867.1	EST_HUMAN	HYPOTHETICAL 24.1 KD PROTEIN IN LEF4-P33 INTERGENIC REGION
9303	19653		1.81	6.0E-07	AW903222.1	EST_HUMAN	7g94f07.x1 NCI_CGAP_Cot16 Homo sapiens cDNA clone IMAGE:3314149 3' similar to TR:O75920 O75920 4F5L ;
323	10284		3.55	5.0E-07	AI831893.1	EST_HUMAN	CM4-NN1029-250300-121-h12 NN1029 Homo sapiens cDNA
1041	10959		2.9	5.0E-07	AA380630.1	EST_HUMAN	wh64f10.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2385547 3'
2995	12923		0.87	5.0E-07	AI831893.1	EST_HUMAN	EST93615 Supt cells Homo sapiens cDNA 5' end
							wh64f10.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2385547 3'

Page 151 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4547	14440	24223	1.44	5.0E-07	AF149774.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 4 through 14 and complete cds
6203	15963	26096	1.71	5.0E-07	AI393981.1	EST_HUMAN	ig06b05.x1 NCI_CGAP_GLL1 Homo sapiens cDNA clone IMAGE:2107953 3' similar to contains Alu repetitive element; contains element A3R repetitive element;
6203	15963	26097	1.71	5.0E-07	AI393981.1	EST_HUMAN	ig06b05.x1 NCI_CGAP_GLL1 Homo sapiens cDNA clone IMAGE:2107953 3' similar to contains Alu repetitive element; contains element A3R repetitive element;
6348	16211	26373	15.93	5.0E-07	AW070885.1	EST_HUMAN	xa31a02.x1 NCI_CGAP_Br18 Homo sapiens cDNA clone IMAGE:2568362 3' similar to gb:X15341
7932	17782	28021	4.11	5.0E-07	AI908587.1	EST_HUMAN	CYTCHROME C OXIDASE POLYPEPTIDE VIA-LIVER (HUMAN);
8805	18619	28909	4.31	5.0E-07	P11087	SWISSPROT	GM-BT178-220499-014 BT178 Homo sapiens cDNA
8863	18675		2.06	5.0E-07	AJ271735.1	NT	COLLAGEN ALPHA 1(I) CHAIN PRECURSOR
9712	19556		2.02	5.0E-07	AW862537.1	EST_HUMAN	Homo sapiens Xq pseudautosomal region; segment 1/2
3918	13827	23608	1.98	4.0E-07	AW009602.1	EST_HUMAN	QV0-CT0383-210400-204-b12 CT0383 Homo sapiens cDNA
7235	17112	27305	5.29	4.0E-07	AW419134.1	EST_HUMAN	ws84h05.x1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2504697 3'
8308	18185	28432	3.84	4.0E-07	AI705528.1	EST_HUMAN	xy49g11.x1 NCI_CGAP_Lu34.1 Homo sapiens cDNA clone IMAGE:2856548 3'
8308	18185	28433	3.84	4.0E-07	AI705528.1	EST_HUMAN	wi81b08.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2399703 3'
8552	18422		2.05	4.0E-07	BE001828.1	EST_HUMAN	wi81b08.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2399703 3'
434	10379	20200	5.01	3.0E-07	U19719.1	NT	PM1-BN0083-030300-003-e12 BN0083 Homo sapiens cDNA
568	10507	20314	2.38	3.0E-07	AJ271735.1	NT	Human microfilament-associated glycoprotein (MFAP2) gene, putative promoter region and alternatively spliced untranslated exons
1352	11288	21114	2.19	3.0E-07	M99149.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
1608	11513		2.23	3.0E-07	M64857.1	NT	Human polymorphic microsatellite DNA
2000	11893		1.01	3.0E-07	AA526763.1	EST_HUMAN	Human Igk subgroup I germline gene, exons 1 and 2, V-region 018 allele
2242	12126	22026	1.15	3.0E-07	M99149.1	NT	ri56b09.s1 NCI_CGAP_Ov2 Homo sapiens cDNA clone IMAGE:380825 similar to contains Alu repetitive element; contains L1.13 L1 repetitive element;
2420	12297	22194	17.25	3.0E-07	BE005077.1	EST_HUMAN	Human polymorphic microsatellite DNA
2420	12297	22195	17.25	3.0E-07	BE005077.1	EST_HUMAN	MRO-BN0115-020300-001-f11 BN0115 Homo sapiens cDNA
2998	12926	22718	0.85	3.0E-07	T84704.1	EST_HUMAN	MRO-BN0115-020300-001-f11 BN0115 Homo sapiens cDNA
3122	13047	22844	1.82	3.0E-07	P38739	SWISSPROT	y450f12.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:111695 5'
4624	14512	24302	7.05	3.0E-07	AV650201.1	EST_HUMAN	HYPOTHETICAL 63.8 KD PROTEIN IN GUT1-RIM1 INTERGENIC REGION PRECURSOR
4654	14540	24328	0.89	3.0E-07	AI797236.1	EST_HUMAN	AV650201 GLC Homo sapiens cDNA clone GLCCCD01 3'
4906	14871	24634	1.47	3.0E-07	T57850.1	EST_HUMAN	wa86b12.x1 Soares NFL_I_GBC_S1 Homo sapiens cDNA clone IMAGE:2347967 3'
4996	14871	24635	1.47	3.0E-07	T57850.1	EST_HUMAN	yc14h09.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:80705 3' similar to similar to gb:M62982 ARACHIDONATE 12-LIPOXYGENASE (HUMAN)
4996	14871	24635	1.47	3.0E-07	T57850.1	EST_HUMAN	yc14h09.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:80705 3' similar to similar to gb:M62982 ARACHIDONATE 12-LIPOXYGENASE (HUMAN)

Page 152 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5476	15396	25462	10.26	3.0E-07	O88907	SWISSPROT	PROTEIN-ARGININE DEIMINASE TYPE IV (PEPTIDYLARGININE DEIMINASE IV) (PAD-R4)
6026	15930		5.32	3.0E-07	AA815175.1	EST_HUMAN	(PEPTIDYLARGININE DEIMINASE TYPE ALPHA)
6433	16294	26456	3	3.0E-07	AW797168.1	EST_HUMAN	cc04c10.s1 NCL CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1339890 3'
8918	18726		3	3.0E-07	AF029308.1	NT	QV1-UM0036-200300-115-g02 UM0036 Homo sapiens cDNA
9339	19408		2.76	3.0E-07	AJ132362.1	NT	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and trypsinogen gene families
26	10013	19807	2.62	2.0E-07	AF262988.1	NT	Rattus norvegicus mRNA for 45 kDa secretory protein, partial
148	10122	19940	4.75	2.0E-07	L77569.1	NT	Homo sapiens TRF2-interacting telomeric RAP1 protein (RAP1) mRNA, complete cds
148	10122	19941	4.75	2.0E-07	L77569.1	NT	Homo sapiens DiGeorge syndrome critical region, telomeric end
175	10146	19962	116.1	2.0E-07	U38849.1	NT	Homo sapiens DiGeorge syndrome critical region, telomeric end
731	10663	20495	1.71	2.0E-07	AF003530.1	NT	Fugu rubripes beta-cytoplasmic(vascular) actin gene, complete cds
731	10663	20496	1.71	2.0E-07	AF003530.1	NT	Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions
							Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions
928	10853	20701	3.11	2.0E-07	AA223260.1	EST_HUMAN	zr08b07.s1 Stratagene NT2 neuronal precursor 937230 Homo sapiens cDNA clone IMAGE:650869 3' similar to gb:1.31860 GLYCOPHORIN A PRECURSOR (HUMAN); contains Alu repetitive element;
929	10854	20702	3.38	2.0E-07	T63042.1	EST_HUMAN	yc15g04.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:80790 3' similar to contains L1 repetitive element;
1147	11060	20903	1.28	2.0E-07	Q26768	SWISSPROT	I/6 AUTOANTIGEN
1582	11486	21347	1.84	2.0E-07	Q09701	SWISSPROT	HYPOTHETICAL 72.5 KD PROTEIN C2F7.10 IN CHROMOSOME 1
3533	13547	23334	14.74	2.0E-07	AF125348.1	NT	Homo sapiens caveolin 1 (CAV1) gene, exon 3 and partial cds
5078	14948	24723	0.97	2.0E-07	AW070995.1	EST_HUMAN	xa05h07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2567485 3' similar to WP:C38H2.1 CE00923 PROBABLE RABGAP DOMAINS ;
5078	14948	24724	0.97	2.0E-07	AW070995.1	EST_HUMAN	xa05h07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2567485 3' similar to WP:C38H2.1 CE00923 PROBABLE RABGAP DOMAINS ;
5198	15061	24826	0.95	2.0E-07	AL163301.2	NT	CE00923 PROBABLE RABGAP DOMAINS ;
5277	15199	24975	1.73	2.0E-07	AW898066.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C101
6009	15914	26041	1.69	2.0E-07	AI208715.1	EST_HUMAN	RC3-NN00066-260400-021-g11 NN0066 Homo sapiens cDNA
6334	16812		3.91	2.0E-07	AV729390.1	EST_HUMAN	qg56d05.x1 Soares_lesitis_NHT Homo sapiens cDNA clone IMAGE:1839177 3'
7627	17478		1.61	2.0E-07	AL163303.2	NT	AV729390 HTC Homo sapiens cDNA clone HTCAEG02 5'
7891	17741	27984	6.48	2.0E-07	AW892507.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C103
9094	19557		1.48	2.0E-07	AI732462.1	EST_HUMAN	GM4-NN0003-280300-124-e06 NN0003 Homo sapiens cDNA
1086	11002		1.21	1.0E-07	AL163282.2	NT	zn85h11.x5 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:565029 3' similar to contains THR.k2 THR repetitive element;
							Homo sapiens chromosome 21 segment HS21C082

Page 153 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2331	12212	22110	0.94	1.0E-07	P10263	SWISSPROT	RETROVIRUS-RELATED GAG POLYPROTEIN (VERSION 1)
2403	12280	22177	0.94	1.0E-07	7549818	NT	Homo sapiens RAB, member of RAS oncogene family-like 2A (RABL2A), transcript variant 2, mRNA
2797	11410	21269	1.75	1.0E-07	P09256	SWISSPROT	GLYCOPROTEIN GPV
3684	11002		1.33	1.0E-07	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
4195	14095	23874	2.37	1.0E-07	AV718662.1	EST_HUMAN	AV718662 GLC Homo sapiens cDNA clone GLCFNF04 5'
4195	14095	23875	2.37	1.0E-07	AV718662.1	EST_HUMAN	AV718662 GLC Homo sapiens cDNA clone GLCFNF04 5'
6103	15997	26132	5.2	1.0E-07	BE047871.1	EST_HUMAN	tz43d06.y1 NCI_CGAP_Brm52 Homo sapiens cDNA clone IMAGE:2291339 5'
6103	15997	26133	5.2	1.0E-07	BE047871.1	EST_HUMAN	tz43d06.y1 NCI_CGAP_Brm52 Homo sapiens cDNA clone IMAGE:2291339 5'
6424	16285	26447	9.04	1.0E-07	N55081.1	EST_HUMAN	yy43c07.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:245484 3'
6782	16661	26850	2.81	1.0E-07	P97435	SWISSPROT	ENTEROPEPTIDASE (ENTEROKINASE)
6782	16661	26851	2.81	1.0E-07	P97435	SWISSPROT	ENTEROPEPTIDASE (ENTEROKINASE)
7180	17057	27246	3.24	1.0E-07	AA693576.1	EST_HUMAN	zi51e10.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:434346 3'
7714	17664	27790	2.37	1.0E-07	BF674524.1	EST_HUMAN	602137714F1 NIH_MGC 83 Homo sapiens cDNA clone IMAGE:4274426 5'
7716	17666	27792	1.28	1.0E-07	AA386311.1	EST_HUMAN	EST185054 Brain IV Homo sapiens cDNA
7980	17830		1.56	1.0E-07	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
9364	19533	25060	3.66	1.0E-07	BE048770.1	EST_HUMAN	hr53c11.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3132212 3' similar to TR:O95722 O95722
9497	19113		1.37	1.0E-07	X64467.1	NT	DJ1163J1.1;
9661	19222		4.61	1.0E-07	X51755.1	NT	H.sapiens ALAD gene for porphobilinogen synthase
7689	17639	27765	1.67	9.0E-08	AV734819.1	EST_HUMAN	Human lambda-immunoglobulin constant region complex (germline)
8520	18392	28656	2.91	9.0E-08	AI891052.1	EST_HUMAN	AV734819 cdA Homo sapiens cDNA clone cdABFB06 5'
8922	18730	29025	3.91	9.0E-08	AL163301.2	NT	wn30a07.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2446932 3' similar to contains OFR.t2
9316	19008		3.09	9.0E-08	AJ251973.1	NT	OFR repetitive element ;
591	12671		2.65	8.0E-08	AJ911352.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C101
1034	10962		0.88	8.0E-08	BE795469.1	EST_HUMAN	Homo sapiens partial steirin-1 gene
3498	13415		1.43	8.0E-08	BE795469.1	EST_HUMAN	wd16b05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2328273 3'
7074	16951	27144	3.38	8.0E-08	AI752367.1	EST_HUMAN	601590133F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943976 5'
7074	16951	27145	3.38	8.0E-08	AI752367.1	EST_HUMAN	601590133F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943976 5'
7551	17402	27616	2.89	8.0E-08	AW970693.1	EST_HUMAN	cn15c02.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cnl5c02 random
8570	18438		2.39	8.0E-08	AF253417.1	NT	cn15c02.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cnl5c02 random
							EST382776 IMAGE resequences, MAGK Homo sapiens cDNA
							Homo sapiens microsomal epoxide hydrolase (EPHX1) gene, complete cds

Table 4
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
73	10037	19874	3.27	7.0E-08	Q02357	SWISSPROT	ANKYRIN 1 (ERYTHROCYTE ANKYRIN)
1338	11244	21102	12.71	7.0E-08	X04809.1	NT	Rat mRNA for ribosomal protein L31
3528	13444	23240	1.09	7.0E-08	P15305	SWISSPROT	DYNEIN HEAVY CHAIN (DYHC)
3528	13444	23241	1.09	7.0E-08	P15305	SWISSPROT	DYNEIN HEAVY CHAIN (DYHC)
8189	18075		4.63	7.0E-08	A1635743.1	EST_HUMAN	cong3.P11.A5 contant Homo sapiens cDNA 3'
8926	18734	29027	5.6	7.0E-08	U24070.1	NT	Rattus norvegicus Munc13-1 mRNA, complete cds
9770	13444	23240	4.54	7.0E-08	P15305	SWISSPROT	DYNEIN HEAVY CHAIN (DYHC)
9770	13444	23241	4.54	7.0E-08	P15305	SWISSPROT	DYNEIN HEAVY CHAIN (DYHC)
9834	19334		1.99	7.0E-08	AJ131016.1	NT	Homo sapiens SCL gene locus
800	10729	20569	2.84	6.0E-08	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
800	10729	20570	2.84	6.0E-08	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
2312	12193	22092	1.73	6.0E-08	BE144398.1	EST_HUMAN	MR0-HT0166-191199-004-g09 HT0166 Homo sapiens cDNA
4155	14055	23829	0.99	6.0E-08	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
8717	18534	28818	2.26	6.0E-08	P11369	SWISSPROT	RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
8819	18632		1.74	6.0E-08	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
79	10063	19880	3.06	5.0E-08	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2189	12076	21981	1.97	5.0E-08	AA493851.1	EST_HUMAN	rh03b09.s1 NCI_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:943193 similar to contains Alu repetitive element;
5178	15042	24809	1.12	5.0E-08	Q06278	SWISSPROT	ALDEHYDE OXIDASE
9057	18839		4.36	5.0E-08	P06681	SWISSPROT	COMPLEMENT C2 PRECURSOR (C3/C5 CONVERTASE)
9245	18958	25317	1.94	5.0E-08	AW851878.1	EST_HUMAN	QY0-CT0225-131099-034-a12 CT0225 Homo sapiens cDNA
1724	11625	21493	1.1	4.0E-08	P25723	SWISSPROT	DORSAL-VENTRAL PATTERNING TOLLOID PROTEIN PRECURSOR
1724	11625	21494	1.1	4.0E-08	P25723	SWISSPROT	DORSAL-VENTRAL PATTERNING TOLLOID PROTEIN PRECURSOR
7278	17155	27350	1.41	4.0E-08	L42571.1	NT	Cricetulus griseus ribosomal transcription factor (UBF2) mRNA, complete cds
7938	17768	28030	4.17	4.0E-08	A050027.1	EST_HUMAN	an22d10.x1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:1699411 3' similar to contains Alu repetitive element; contains element MER22 repetitive element ;
8274	18154		1.79	4.0E-08	AJ238617.1	NT	Homo sapiens mRNA for UGA suppressor tRNA-associated antigenic protein (IRNA48 gene)
8439	18313	28570	3.66	4.0E-08	BF692493.1	EST_HUMAN	602248024F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4333300 5'
8439	18313	28571	3.66	4.0E-08	BF692493.1	EST_HUMAN	602248024F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4333300 5'
9061	19690		1.54	4.0E-08	W76159.1	EST_HUMAN	zd65g03.r1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:345556 5' similar to contains L1.17 L1 repetitive element ;
9703	19252		1.46	4.0E-08	A134353.1	EST_HUMAN	tb95a11.x1 NCI_CGAP_Cot16 Homo sapiens cDNA clone IMAGE:2062076 3' similar to contains MER18.b3 MER18 MER18 repetitive element ;

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5184	15048	24812	7.24	3.0E-08	AA191195.1	EST_HUMAN	zq45d05.r1 Stragene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:632649 5'
5184	15048	24813	7.24	3.0E-08	AA191195.1	EST_HUMAN	zq45d05.r1 Stragene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:632649 5'
5446	15367	25423	1.99	3.0E-08	BE018348.1	EST_HUMAN	bb79a10.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3048570 5' similar to TR:Q9Z158 Q9Z158
6163	15120	24864	3.58	3.0E-08	AI792737.1	EST_HUMAN	SYNTAXIN 17.1
6451	16312	26478	1.41	3.0E-08	AL163246.2	NT	qs76f11.y6 NCI_CGAP_P28 Homo sapiens cDNA clone IMAGE:1944045 5'
							Homo sapiens chromosome 21 segment HS21C046
5558	16416		2.97	3.0E-08	AI436352.1	EST_HUMAN	th93h09.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2126273 3' similar to TR:Q13537 Q13537 MER37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE. ;
9027	18819		11.6	3.0E-08	R18420.1	EST_HUMAN	y902f04.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:30948 5' similar to contains Alu repetitive element
199	10171		15.76	2.0E-08	AW302996.1	EST_HUMAN	yr87f06.x1 NCI_CGAP_Lu26 Homo sapiens cDNA clone IMAGE:2767139 3'
223	10194		7.97	2.0E-08	AA425598.1	EST_HUMAN	zn48f07.r1 Soares_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:779317 5' similar to contains Alu repetitive element; contains element MER15 repetitive element ;
488	10431	20245	1.49	2.0E-08	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
644	10581	20396	10.93	2.0E-08	AW866438.1	EST_HUMAN	MR0-OT0080-240200-001-g08 OT0080 Homo sapiens cDNA
644	10581	20397	10.93	2.0E-08	AW866438.1	EST_HUMAN	MR0-OT0080-240200-001-g08 OT0080 Homo sapiens cDNA
974	10898		37.42	2.0E-08	BE280477.1	EST_HUMAN	601156321F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138893 5'
1319	11226	21082	1.93	2.0E-08	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
1707	11608		1.03	2.0E-08	BE734871.1	EST_HUMAN	601570463F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3845199 5'
1811	11708		3.99	2.0E-08	AW270271.1	EST_HUMAN	xp43f11.x1 NCI_CGAP_HN11 Homo sapiens cDNA clone IMAGE:2743149 3'
2368	12248	22140	1.42	2.0E-08	AA731948.1	EST_HUMAN	nw64h01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1251409 3' similar to contains L1.13 L1
2496	12371		2.16	2.0E-08	K00216.1	NT	repetitive element ;
3171	13096	22901	6.02	2.0E-08	O42280	SWISSPROT	Sheep Hls-rRNA-GUG
3171	13096	22902	6.02	2.0E-08	O42280	SWISSPROT	WNT-14 PROTEIN PRECURSOR
3783	13895		1.66	2.0E-08	AW813620.1	EST_HUMAN	WNT-14 PROTEIN PRECURSOR
3986	13893	23669	0.78	2.0E-08	U82668.1	NT	RC3-ST0197-161099-012-b03 ST0197 Homo sapiens cDNA
							Homo sapiens shox gene, alternatively spliced products, complete cds
4305	14203		3.35	2.0E-08	AA459040.1	EST_HUMAN	aa26c07.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:814380 5' similar to contains L1.12 L1
4876	14756		2.89	2.0E-08	AW572881.1	EST_HUMAN	he17h08.x2 NCI_CGAP_CML1 Homo sapiens cDNA clone IMAGE:2919327 3' similar to contains Alu repetitive element
6722	16602	26791	1.31	2.0E-08	AA490121.1	EST_HUMAN	ab02g06.s1 Stragene fetal retina 937202 Homo sapiens cDNA clone IMAGE:839674 3'
8995	18799	29092	11.62	2.0E-08	BF588904.1	EST_HUMAN	nea32e09.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3257969 3'

Page 156 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1493	12696	21257	1.13	1.0E-08	P31792	SWISSPROT	POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
2005	11997		2.92	1.0E-08	BE141959.1	EST_HUMAN	PM2-HT0130-150999-001-f12 HT0130 Homo sapiens cDNA
3155	13080	22881	1.24	1.0E-08	BE246844.1	EST_HUMAN	TCBAP1D5232 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP5232
3155	13080	22882	1.24	1.0E-08	BE246844.1	EST_HUMAN	TCBAP1D5232 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP5232
5191	15054	24818	1.43	1.0E-08	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
5438	15358	25414	4.05	1.0E-08	AJ010770.1	NT	Homo sapiens hyperion gene, exons 1-50
6975	16852	27045	1.84	1.0E-08	AI015304.1	EST_HUMAN	035a05.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1618736 3'
8633	18498	28773	3.66	1.0E-08	AF044083.1	NT	Homo sapiens major histocompatibility locus class III region
9434	19074		2.01	1.0E-08	X51755.1	NT	Human lambda-immunoglobulin constant region complex (germline)
9804	19316		6.3	1.0E-08	X51755.1	NT	Human lambda-immunoglobulin constant region complex (germline)
9894	19518		1.76	1.0E-08	BF375398.1	EST_HUMAN	MR4-ST0240-240700-013-g04 ST0240 Homo sapiens cDNA
4149	14049	23823	2.98	9.0E-09	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079
4149	14049	23824	2.98	9.0E-09	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079
3444	13361		1.07	8.0E-09	BE012076.1	EST_HUMAN	RC5-BN1058-270400-031-C06 BN1058 Homo sapiens cDNA
6307	16171	26328	6.12	8.0E-09	AI183500.1	EST_HUMAN	qq42e07.x1 Soares_fetal_heart_NHH19W Homo sapiens cDNA clone IMAGE:1732164 3' similar to contains MSR1.t1 MSR1 repetitive element;
6666	16546	26743	2.71	8.0E-09	AW900159.1	EST_HUMAN	CM0-NN1004-100300-273-e06 NN1004 Homo sapiens cDNA
7196	17073		3.06	8.0E-09	AA938882.1	EST_HUMAN	op74d08.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1582575 3'
3555	13469		1.68	7.0E-09	D86842.1	NT	Homo sapiens DNA for 3-ketocyl-CoA thiolase beta-subunit of mitochondrial trifunctional protein, exon 2, 3
4558	14450	24236	0.99	7.0E-09	D00849.1	NT	Homo sapiens gene for enteric smooth muscle gamma-actin, exon 2, 3
7335	17203	27403	3.27	7.0E-09	L09709.1	NT	Human lysosomal membrane glycoprotein-2 (LAMP2) gene, 5' end and flanking region
7850	17700	27945	1.84	7.0E-09	BE254880.1	EST_HUMAN	60111173F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3351834 5'
2107	11996		1.06	6.0E-09	AL040439.1	EST_HUMAN	DKFZp434C0514_r1_434 (synonym: htes5) Homo sapiens cDNA clone DKFZp434C0514 5'
3941	13849	23625	1.06	6.0E-09	AA557940.1	EST_HUMAN	n17a11.s1 NCL_CGAP_HSC1 Homo sapiens cDNA clone IMAGE:1040924 similar to contains L1.12 L1 repetitive element;
4906	14786	24582	4.44	6.0E-09	BE169421.1	EST_HUMAN	PM1-HT0527-160200-001-h05 HT0527 Homo sapiens cDNA
5305	15226	25030	8.19	6.0E-09	AW195784.1	EST_HUMAN	xn85h08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2701311 3'
7294	17170	27370	2.26	6.0E-09	4503710	NT	Homo sapiens fibroblast growth factor receptor 3 (achondroplasia, thanatophoric dwarfism) (FGFR3) mRNA
7896	17746		4.06	6.0E-09	AF200923.2	NT	Homo sapiens testis-specific kinase substrate (TSKS) gene, complete cds
1394	11299	21157	3.09	5.0E-09	BE149284.1	EST_HUMAN	RC2-HT0252-120200-014-h10 HT0252 Homo sapiens cDNA

Page 157 of 413
Table 4
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5858	15764	25881	1.92	5.0E-09	AA359454.1	EST_HUMAN	EST68746 Fetal lung II Homo sapiens cDNA 5' end
7811	17661	27901	2.69	5.0E-09	AW789667.1	EST_HUMAN	PM2-UM0053-240300-005-c09 UM0053 Homo sapiens cDNA
510	10452		1.68	4.0E-09	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
949	10873		2.31	4.0E-09	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
1453	11358	21222	0.95	4.0E-09	9588718	NT	Homo sapiens hypothetical protein (AF038169), mRNA
2379	12259	22151	6.36	4.0E-09	AA350878.1	EST_HUMAN	EST58385 Infant brain Homo sapiens cDNA 5' end similar to similar to heat shock protein, 90 kDa
2303	12184	22082	3.82	3.0E-09	BE222239.1	EST_HUMAN	hu09ed09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3166120 3' similar to contains MER18.13
2506	12380	22270	1.25	3.0E-09	BE222239.1	EST_HUMAN	hu09ed09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3166120 3' similar to contains MER18.13
2614	12482	22371	1.1	3.0E-09	P23249	SWISSPROT	PROTEIN MOV-10
3287	13208	23008	1.1	3.0E-09	BE222239.1	EST_HUMAN	hu09ed09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3166120 3' similar to contains MER18.13
4329	14226	24008	3.22	3.0E-09	AF175325.1	NT	MER18 repetitive element;
4411	14305	24088	1.54	3.0E-09	Q9Y3R5	SWISSPROT	Homo sapiens eukaryotic initiation factor 4A1 (EIF4A1) gene, partial cds
7884	17734	27978	1.73	3.0E-09	AL163247.2	NT	258.1 KDA PROTEIN C21ORF5 (K1AA0933)
8384	18261	28510	3.8	3.0E-09	BF109943.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C047
8384	18261	28511	3.8	3.0E-09	BF109943.1	EST_HUMAN	7172c08.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3527030 3'
795	10724		0.93	2.0E-09	X16674.1	NT	7172c08.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3527030 3'
1237	11144	20995	5.23	2.0E-09	AL163284.2	NT	H. sapiens PADPRP-I gene for NAD(+) ADP-ribosyltransferase
1637	11541		10.52	2.0E-09	AL118573.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C084
2278	12162	22059	2.25	2.0E-09	Q9Y3R5	SWISSPROT	DKFp761B1710_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFp761B1710 5'
3858	13769	23561	3.65	2.0E-09	O60241	SWISSPROT	258.1 KDA PROTEIN C21ORF5 (K1AA0933)
6405	16266	26428	8.9	2.0E-09	AA461430.1	EST_HUMAN	BRAIN-SPECIFIC ANGIOGENESIS INHIBITOR 2 PRECURSOR
7055	16932	27122	1.37	2.0E-09	AJ271735.1	NT	zx63h06.r1 Soares_tbal_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:796187 5' similar to contains
8589	18457	28726	2.11	2.0E-09	AL163248.2	NT	Alu repetitive element;
9576	10724		11.53	2.0E-09	X16674.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
9940	19749		1.62	2.0E-09	AA226070.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C048
1093	11009	20850	2.48	1.0E-09	5031624	NT	H. sapiens PADPRP-I gene for NAD(+) ADP-ribosyltransferase
1093	11009	20851	2.48	1.0E-09	5031624	NT	nc11c02.r1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:1007810 similar to contains Alu repetitive element;
1616	11520		0.95	1.0E-09	AJ228041.1	NT	Homo sapiens CCAAT-box-binding transcription factor (CBF2) mRNA
							Homo sapiens CCAAT-box-binding transcription factor (CBF2) mRNA
							Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2453	12330		0.94	1.0E-09	AI356086.1	EST_HUMAN	qy64e1.x1 NCJ_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2016812 3' similar to contains MER12.12 MER12 repetitive element ;
2860	12788	22580	1.51	1.0E-09	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (naip) and survival motor neuron protein (smn) genes, complete cds
2895	12822	22614	3.25	1.0E-09	M28699.1	NT	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
2895	12822	22615	3.25	1.0E-09	M28699.1	NT	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
2949	12876	22674	1.23	1.0E-09	P11789	SWISSPROT	MYOSIN LIGHT CHAIN KINASE, SMOOTH MUSCLE AND NON-MUSCLE ISOZYMES (MLCK) [CONTAINS: TELOKIN]
3002	12930	22722	0.78	1.0E-09	BE535440.1	EST_HUMAN	601058602F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3445177 5'
4692	14578		4.26	1.0E-09	AA719297.1	EST_HUMAN	zh35b03.s1 Soares_pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:414029 3' similar to contains Alu repetitive element; contains element MER22 repetitive element ;
5560	15476	25549	1.37	1.0E-09	U07000.1	NT	Human breakpoint cluster region (BCR) gene, complete cds
5736	15644	25749	3.21	1.0E-09	P26694	SWISSPROT	CIRCUMSPOROZOITE PROTEIN PRECURSOR (CS)
7911	17761		3.1	1.0E-09	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
9478	19689	24936	2.14	1.0E-09	11418127	NT	Homo sapiens GTP binding protein 1 (GTPBP1), mRNA
1287	11195	21048	1.8	9.0E-10	AW867740.1	EST_HUMAN	MIR0-SN0040-050500-002-c07 SN0040 Homo sapiens cDNA
2803	12733	22532	6.03	9.0E-10	AI870071.1	EST_HUMAN	we78h03.x1 Soares Dieckgraefe_colon_NHCD Homo sapiens cDNA clone IMAGE:2347253 3' similar to SW:RL29_HUMAN P47914 60S RIBOSOMAL PROTEIN L29 ; contains element PTR5 repetitive element ;
6087	16032	26172	4.63	9.0E-10	AI452982.1	EST_HUMAN	ij46b09.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2144537 3' similar to TR:000372 000372 PUTATIVE P150. ;
141	10115	19935	9.43	8.0E-10	U63630.2	NT	Homo sapiens MCM4 (MCM4) and DNA-PKcs (PRKDC) genes, partial cds
3300	13222	23022	0.87	8.0E-10	BE080748.1	EST_HUMAN	QV1-BT0631-150200-071-401 BT0631 Homo sapiens cDNA
4106	14006	23782	2.82	8.0E-10	AA376832.1	EST_HUMAN	EST89564 Small intestine I Homo sapiens cDNA 5' end
7725	17575		2.32	8.0E-10	U36308.2	NT	Homo sapiens lens major intrinsic protein (MIP) gene, complete cds
9005	18808	29100	2.31	8.0E-10	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
686	10619	20444	12.45	7.0E-10		NT	Homo sapiens TPA inducible protein (LOC51586), mRNA
686	10619	20445	12.45	7.0E-10	7706225	NT	Homo sapiens TPA inducible protein (LOC51586), mRNA
1605	11510	21371	1.87	7.0E-10	Q13342	SWISSPROT	LYSP100 PROTEIN (LYMPHOID-RESTRICTED HOMOLOG OF SP100)
1974	11867		1.01	7.0E-10	P08548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
2512	12386		16.88	7.0E-10	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
3049	12976	22768	2.65	7.0E-10	X00856.1	NT	H.sapiens DHFR gene, exon 3
5754	15662	25769	3.98	7.0E-10	AA345220.1	EST_HUMAN	EST51247 Gall bladder II Homo sapiens cDNA 5' end
6514	16373		1.39	7.0E-10	P35084	SWISSPROT	DNA-DIRECTED RNA POLYMERASE II LARGEST SUBUNIT

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
895	10821	20666	2.81	6.0E-10	AJ400877.1	NT	Homo sapiens ASCL3 gene, CEGP1 gene, C11orf14 gene, C11orf15 gene, C11orf16 gene and C11orf17 gene
2844	12511	22402	1.47	6.0E-10	A424405.1	EST_HUMAN	U02407.x1 NCL CGAP_P128 Homo sapiens cDNA clone IMAGE:2095021 3'
4634	14522		2.51	6.0E-10	AW853719.1	EST_HUMAN	RC3-CT0254-031099-012-g12 CT0254 Homo sapiens cDNA
9092	18865		1.79	6.0E-10	AW971823.1	EST_HUMAN	EST384012 IMAGE resequences, MAGL Homo sapiens cDNA
9947	19597		3.54	6.0E-10	BE699410.1	EST_HUMAN	RC3-NN0070-110800-014-h07 NN0070 Homo sapiens cDNA
744	10675		4.5	5.0E-10	AL046804.1	EST_HUMAN	DKFZp434N219_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434N219 5'
3430	13347	23152	1.48	5.0E-10	Q01033	SWISSPROT	HYPOTHETICAL GENE 48 PROTEIN
6334	16197		1.92	5.0E-10	BF105159.1	EST_HUMAN	601822184F1 NIH_MGC_75 Homo sapiens cDNA clone IMAGE:4042413 5'
7496	17366	27570	1.79	5.0E-10	P34678	SWISSPROT	HYPOTHETICAL 67.9 KD PROTEIN ZK688.8 IN CHROMOSOME III
7496	17366	27571	1.79	5.0E-10	P34678	SWISSPROT	HYPOTHETICAL 67.9 KD PROTEIN ZK688.8 IN CHROMOSOME III
106	10087		0.99	4.0E-10	AI221083.1	EST_HUMAN	qg09f09.x1 Soares_placenta_8to9weeks_2NbHP8to9w Homo sapiens cDNA clone IMAGE:1759049 3' similar to contains LTR8.b2 LTR8 repetitive element;
1951	11846	21732	1.4	4.0E-10	AW594709.1	EST_HUMAN	hg58g03.x1 NCL CGAP_G06 Homo sapiens cDNA clone IMAGE:2949844 3' similar to contains Alu repetitive element;
2527	12401	22292	6.09	4.0E-10	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
6259	16125	26278	19.23	4.0E-10	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
8436	18310		7.7	4.0E-10	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
897	10822	20668	1.72	3.0E-10	N36113.1	EST_HUMAN	yy2f06.s1 Soares_melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:272963 3' similar to contains L1.t1 L1 repetitive element;
1329	11296		6.63	3.0E-10	AY005150.1	NT	Homo sapiens extracellular glycoprotein lacritin precursor, gene, complete cds
4435	14330	24117	1.1	3.0E-10	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4435	14330	24118	1.1	3.0E-10	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
5765	15672	25779	2.83	3.0E-10	P20350	SWISSPROT	RHOMBOD PROTEIN (VEINLET PROTEIN)
5833	15739	25851	3.27	3.0E-10	BE302970.1	EST_HUMAN	ba76d08.y1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2906319 5'
6562	16420	26599	1.31	3.0E-10	AV743302.1	EST_HUMAN	AV743302 CB Homo sapiens cDNA clone CBFBGD08 5'
6562	16420	26600	1.31	3.0E-10	AV743302.1	EST_HUMAN	AV743302 CB Homo sapiens cDNA clone CBFBGD08 5'
7067	16944	27136	1.58	3.0E-10	H87208.1	EST_HUMAN	ys74b12.s1 Soares_retina N2b4HR Homo sapiens cDNA clone IMAGE:220511 3' similar to contains MER29 repetitive element;
7233	17110	27302	1.47	3.0E-10	AW850731.1	EST_HUMAN	IL3-CT0219-160200-064-B06 CT0219 Homo sapiens cDNA
7233	17110	27303	1.47	3.0E-10	AW850731.1	EST_HUMAN	IL3-CT0219-160200-064-B06 CT0219 Homo sapiens cDNA
7979	17829		2.56	3.0E-10	T65891.1	EST_HUMAN	yc11e12.r1 Strategene lung (#937210) Homo sapiens cDNA clone IMAGE:80398 5'

Page 160 of 413
Table 4
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8026	17876		1.54	3.0E-10	AA769294.1	EST_HUMAN	n236g03.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1289908 3'
9737	19271	25227	2.03	3.0E-10	BE179517.1	EST_HUMAN	IL3-HT0618-110500-136-E07 HT0618 Homo sapiens cDNA
32	10019	19814	1.43	2.0E-10	P48988	SWISSPROT	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B)
32	10019	19815	1.43	2.0E-10	P48988	SWISSPROT	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B)
1855	11751		5.91	2.0E-10	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds; neuronal apoptosis inhibitory protein (naip) and survival motor neuron protein (smn) genes, complete cds
5547	15463		2.41	2.0E-10	Q28640	SWISSPROT	(HPRG)
5787	15693	25801	1.71	2.0E-10	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450 polypeptide 5 (CYP3A5) gene, partial cds
6367	16230	26389	5.79	2.0E-10	BE791082.1	EST_HUMAN	601586208F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3940824 5'
1492	11397		3.56	1.0E-10	AW867767.1	EST_HUMAN	MRO-SN0038-290300-001-f01 SN0038 Homo sapiens cDNA
1589	11493	21353	3.14	1.0E-10	AV652123.1	EST_HUMAN	AV652123 GLC Homo sapiens cDNA clone GLCXA11 3'
2537	12411		2.4	1.0E-10	AW652123.1	EST_HUMAN	QV0-CT0225-191199-058-e08 CT0225 Homo sapiens cDNA
3456	13372	23178	0.89	1.0E-10	AW832912.1	EST_HUMAN	QV2-TT0003-161199-073-g10 TT0003 Homo sapiens cDNA
3770	13411		0.91	1.0E-10	AL041685.1	EST_HUMAN	DKFZp434N1317_1 434 (synonym: hles3) Homo sapiens cDNA clone DKFZp434N1317 5'
3933	13842		5.44	1.0E-10	AF213884.1	NT	Homo sapiens nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (NFKB1) gene, complete cds
4036	13939	23716	4.51	1.0E-10	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenoleukodystrophy protein >
4036	13939	23717	4.51	1.0E-10	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenoleukodystrophy protein >
4042	13945	23724	2.25	1.0E-10	AB031069.1	NT	Homo sapiens PCCX1 mRNA for protein containing CXXC domain 1, complete cds
4079	13981		2.06	1.0E-10	M30629.1	NT	Human pregnancy-specific glycoprotein beta-1 (SP1) mRNA, last exon
5145	15012		0.93	1.0E-10	X87344.1	NT	H.sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DQB2 and RING8, 9, 13 and 14 genes
7859	17709		4.59	1.0E-10	AA081868.1	EST_HUMAN	zn23g06.r1 Stratagene neuroepithelium NT2RAM1 937234 Homo sapiens cDNA clone IMAGE:548314 5'
8286	18165	28408	3.4	1.0E-10	AI03280.1	EST_HUMAN	oy65h03.x1 Soares_fetal_liver_spleen_1N1FLS_S1 Homo sapiens cDNA clone IMAGE:1672661 3'
9037	15012		1.43	1.0E-10	X87344.1	NT	H.sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DQB2 and RING8, 9, 13 and 14 genes
9084	18859		1.3	1.0E-10	AA937885.1	EST_HUMAN	zn68b10.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:729211 5'

Page 161 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
261	10226	20042	1.2	9.0E-11	BE145600.1	EST_HUMAN	IL2-HT0203-291099-016-c08 HT0203 Homo sapiens cDNA
2057	11947	21843	5.43	9.0E-11	AL134395.1	EST_HUMAN	DKFp547D225_r1 547 (synonym: hbr1) Homo sapiens cDNA clone DKFp547D225 5'
2057	11947	21844	5.43	9.0E-11	AL134395.1	EST_HUMAN	DKFp547D225_r1 547 (synonym: hbr1) Homo sapiens cDNA clone DKFp547D225 5'
3337	13257	23064	2.25	9.0E-11	AL134395.1	EST_HUMAN	DKFp547D225_r1 547 (synonym: hbr1) Homo sapiens cDNA clone DKFp547D225 5'
3337	13257	23065	2.25	9.0E-11	AL134395.1	EST_HUMAN	DKFp547D225_r1 547 (synonym: hbr1) Homo sapiens cDNA clone DKFp547D225 5'
4400	14295	24079	1.09	9.0E-11	AA775985.1	EST_HUMAN	ae7801.s1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:970297 3'
5421	15342		4	9.0E-11	BE079780.1	EST_HUMAN	RC6-BT0627-140200-011-E06 BT0627 Homo sapiens cDNA
9410	19062	25312	2.69	9.0E-11	C16635.1	EST_HUMAN	C16635 Clontech human aorta polyA+ mRNA (#6572) Homo sapiens cDNA clone GEN-506B08 5'
3078	13005		9.97	8.0E-11	H19971.1	EST_HUMAN	yn53711.s1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:172173 3' similar to contains L1 repetitive element ;
3981	13792	23580	0.83	8.0E-11	AK478817.1	EST_HUMAN	tm54c09.x1 NCI_OGAP_Kid11 Homo sapiens cDNA clone IMAGE:2161936 3'
3957	13665	23641	4.03	8.0E-11	N23712.1	EST_HUMAN	iw46e06.s1 Weizmann Olfactory Epithelium Homo sapiens cDNA clone IMAGE:255298 3'
1431	11336	21202	2.11	7.0E-11	AA330642.1	EST_HUMAN	EST34392 Embryo, 6 week 1 Homo sapiens cDNA 5' end
6949	16827	27020	2.55	7.0E-11	AF163864.1	NT	Homo sapiens SNCA isoform (SNCA) gene, complete cds, alternatively spliced
7873	17723		1.22	7.0E-11	P11369	SWISSPROT	RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
9545	19145		1.31	7.0E-11	AV701656.1	EST_HUMAN	AV701656 ADB Homo sapiens cDNA clone ADBABC09 5'
408	10352	20180	5.16	6.0E-11	M55270.1	NT	Human matrix Gla protein (MGP) gene, complete cds
408	10352	20181	5.16	6.0E-11	M55270.1	NT	Human matrix Gla protein (MGP) gene, complete cds
6529	16388	26568	3.58	6.0E-11	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
6371	16750	26945	6.49	6.0E-11	AV727859.1	EST_HUMAN	AV727859 HTC Homo sapiens cDNA clone HTCA5C06 5'
11	9997	19788	0.92	5.0E-11	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
3320	9997	19788	1.48	5.0E-11	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
4135	14035	23811	1.49	5.0E-11	P48034	SWISSPROT	ALDEHYDE OXIDASE
5926	15831	25954	1.69	5.0E-11	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
6446	16307	26472	14.59	5.0E-11	11416799	NT	Homo sapiens protocadherin beta 3 (PCDH3), mRNA
8975	18780	29072	1.79	5.0E-11	AJ289880.1	NT	Homo sapiens KIA0851 gene (partial), X13 gene and LZTFL1 gene
1380	11285		1.4	4.0E-11	AA436042.1	EST_HUMAN	zu01br12.1 Soares testis NHT Homo sapiens cDNA clone IMAGE:730559 5'
2760	12822	22514	8.45	4.0E-11	BE886900.1	EST_HUMAN	601507531F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3909295 5'
4518	14411	24196	1.37	4.0E-11	D44666.1	EST_HUMAN	HUMSUP089 Human brain cDNA Homo sapiens cDNA clone 069
5997	15803	25927	2.94	4.0E-11	P20095	SWISSPROT	PRE-MRNA SPLICING FACTOR RNA HELICASE PRP2
						NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
6362	16225		3.66	4.0E-11	AF224699.1	EST_HUMAN	
7405	17272		1.59	4.0E-11	BE149425.1	EST_HUMAN	RC1-HT0256-210100-013-008 HT0256 Homo sapiens cDNA

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9611	19190	25252	1.93	4.0E-11	11545732	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
1476	11381	21245	2.15	3.0E-11	6679077	NT	Mus musculus expressed in non-metastatic cells 2, protein (NM23B) (Nme2), mRNA
4179	14079		1.45	3.0E-11	AA309248.1	EST_HUMAN	EST180120 Liver, hepatocellular carcinoma Homo sapiens cDNA 5' end
944	10869	20716	1.58	2.0E-11	AH50502.1	EST_HUMAN	q36c04.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1752102 3' similar to contains MER10.i3
1168	11080	20926	3.64	2.0E-11	R24807.1	EST_HUMAN	MER10 repetitive element ;
1168	11080	20927	3.64	2.0E-11	R24807.1	EST_HUMAN	yg43e12.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:35144 5'
1596	11500	21359	3.91	2.0E-11	L17432.1	NT	yg43e12.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:35144 5'
1596	11500	21360	3.91	2.0E-11	L17432.1	NT	Gallus gallus rho-globin, beta-H globin, beta-A globin, epsilon-globin, and olfactory receptor-like protein
1600	11505	21365	1.04	2.0E-11	A126371.1	EST_HUMAN	COR3'beta (COR3'beta) genes, complete cds
2737	12599	22493	1.11	2.0E-11	AF087913.1	NT	Gallus gallus rho-globin, beta-H globin, beta-A globin, epsilon-globin, and olfactory receptor-like protein
3160	13085	22889	4.23	2.0E-11	P10263	SWISSPROT	COR3'beta (COR3'beta) genes, complete cds
3284	13205	23005	0.87	2.0E-11	A1478617.1	EST_HUMAN	qc51c10.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1713138 3' similar to
3452	13368		0.95	2.0E-11	AF020503.1	NT	gb:L02932 PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR ALPHA (HUMAN);contains L1.t1
4501	14395		0.97	2.0E-11	AL163227.2	NT	L1 repetitive element ;
4851	14732		5.46	2.0E-11	BE062558.1	EST_HUMAN	Human endogenous retrovirus HERV-P-T47D
4961	14836	24604	1.32	2.0E-11	AA307331.1	EST_HUMAN	RETROVIRUS-RELATED GAG POLYPROTEIN (VERSION 1)
5810	15715	25828	1.83	2.0E-11	AA581028.1	EST_HUMAN	tm54c09.x1 NCI_CGAP_K1d11 Homo sapiens cDNA clone IMAGE:2161936 3'
7318	17194		1.43	2.0E-11	AF029308.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHT) gene, exon 5
7900	17750	27989	4.61	2.0E-11	Q13606	SWISSPROT	Homo sapiens chromosome 21 segment HS21C027
8457	18330	28591	2.07	2.0E-11	AA035369.1	EST_HUMAN	QV2-BT0258-261089-014-a01 BT0258 Homo sapiens cDNA
8457	18330	28592	2.07	2.0E-11	AA035369.1	EST_HUMAN	EST178226 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end similar to alpha-2-macroglobulin
9160	19679		1.29	2.0E-11	AA704195.1	EST_HUMAN	nc83h05.r1 NCI_CGAP_GC1 Homo sapiens cDNA clone IMAGE:797433 5' similar to SW:PR16_YEAST
9192	18927		2.25	2.0E-11	AW842143.1	EST_HUMAN	P15938 PRE-MRNA SPLICING FACTOR RNA HELICASE PRP16. ;
9216	18943	25366	1.98	2.0E-11	BF377859.1	EST_HUMAN	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and trypsinogen gene families
9477	19103		1.89	2.0E-11	D25217.2	NT	OLFACTORY RECEPTOR 511 (OLFACTORY RECEPTOR-LIKE PROTEIN OLF1)
							zk27g02.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:471794 3'
							zk27g02.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:471794 3'
							zi77e03.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:460924 3'
							RC0-CN0027-210100-011-c01 CN0027 Homo sapiens cDNA
							CM2-TN0140-070900-372-g01 TN0140 Homo sapiens cDNA
							Homo sapiens mRNA for KIAA0027 protein, partial cds

Page 163 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9827	19201		2.38	2.0E-11	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
9930	19401		2.38	2.0E-11	11417966	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
990	10594	20412	1.24	1.0E-11	AJ131016.1	NT	Homo sapiens SCL gene locus
1199	11109	20954	2.58	1.0E-11	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079
1483	11388		1.94	1.0E-11	AF119914.1	NT	Homo sapiens PRO3078 mRNA, complete cds
2079	11969	21862	3.12	1.0E-11	AF000573.1	NT	Homo sapiens homogenisate 1,2-dioxygenase gene, complete cds
3454	13370	23174	1.32	1.0E-11	BE004316.1	EST_HUMAN	CMO-BN0705-170300-292-d12 BN0105 Homo sapiens cDNA
5269	15191	24966	14.34	1.0E-11	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
6773	16852	26840	3.25	1.0E-11	4885546	NT	Homo sapiens PHD finger protein 2 (PHF2) mRNA
6889	16866	27060	5.41	1.0E-11	R13174.1	EST_HUMAN	yf73008.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:28168 5'
7232	17109	27300	1.32	1.0E-11	BF365119.1	EST_HUMAN	QV4-NN1149-250900-423-a03 NN1149 Homo sapiens cDNA
7232	17109	27301	1.32	1.0E-11	BF365119.1	EST_HUMAN	QV4-NN1149-250900-423-a03 NN1149 Homo sapiens cDNA
8607	18474	28747	1.9	1.0E-11	BF680078.1	EST_HUMAN	602154807F1 NIH_MGC 83 Homo sapiens cDNA clone IMAGE:4295977 5'
9702	19483		1.29	1.0E-11	Z20377.1	EST_HUMAN	HSAAACADH P, Human foetal Brain Whole tissue Homo sapiens cDNA
2822	12849	22649	0.82	9.0E-12	P20742	SWISSPROT	PREGNANCY ZONE PROTEIN PRECURSOR
7641	17491	27712	1.22	9.0E-12	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
7641	17491	27713	1.22	9.0E-12	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
9270	18974		3.57	8.0E-12	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region; segment 2/2
4562	14454	24241	2.75	7.0E-12	Q05904	SWISSPROT	34 KD SPICULE MATRIX PROTEIN PRECURSOR (LSM34)
8956	18545	28828	11.23	7.0E-12	AA704735.1	EST_HUMAN	z123g01.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:451152 3'
3500	13417		0.92	6.0E-12	AV730554.1	EST_HUMAN	AV730554 HTF Homo sapiens cDNA clone HTFAWF06 5'
							nz88f11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1302573 3' similar to contains Alu repetitive element;
4252	14151	23925	7.85	6.0E-12	AA732516.1	EST_HUMAN	Morone saxatilis myosin heavy chain FM3A (FM3A) mRNA, complete cds
7201	17078	27263	1.19	6.0E-12	AF003249.1	NT	od10g11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1367588 similar to contains MER29.12
7453	17262		1.86	6.0E-12	AA847898.1	EST_HUMAN	MER29 repetitive element;
1027	10945	20790	2.88	5.0E-12	T06573.1	EST_HUMAN	EST04462 Fetal brain, Stratagene (cat#336206) Homo sapiens cDNA clone HFBDV33
3344	13264	23070	1.18	5.0E-12	BE047779.1	EST_HUMAN	z42805.y1 NCI_CGAP_Brn52 Homo sapiens cDNA clone IMAGE:2291217 5'
3566	13580	23367	5.93	5.0E-12	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region; segment 2/2
5171	15037		0.84	5.0E-12	AA720661.1	EST_HUMAN	nw24b11.s1 NCI_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1241373 3'
5667	15578	25676	4.75	5.0E-12	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
5667	15578	25677	4.75	5.0E-12	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
5909	15815	25940	9.12	5.0E-12	AW974760.1	EST_HUMAN	EST386850 IMAGE resequences, MAGN Homo sapiens cDNA
7268	17145	27339	2.15	5.0E-12	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2

Page 164 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7895	17745		4.67	5.0E-12	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
244	10211	20027	3.42	4.0E-12	AA700326.1	EST_HUMAN	zj74g11.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:460676 3'
245	10211	20027	3.55	4.0E-12	AA700326.1	EST_HUMAN	zj74g11.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:460676 3'
4520	14413	24198	0.85	4.0E-12	AI89984.1	EST_HUMAN	b26h05.x1 NCL CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2270745 3' similar to TR:Q13539 Q13539 MARINER TRANSPOSASE.;
6797	16676		2.89	4.0E-12	AF109907.1	NT	Homo sapiens S164 gene, partial cds; PS1 and hypothetical protein genes, complete cds; and S171 gene, partial cds
8431	18305	28561	3.51	4.0E-12	AJ29043.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
9520	19131		1.9	4.0E-12	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
600	10536	20345	3.81	3.0E-12	AW341683.1	EST_HUMAN	hd13d01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2909377 3' similar to TR:O14517 O14517 SMRP.;
600	10536	20346	3.81	3.0E-12	AW341683.1	EST_HUMAN	hd13d01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2909377 3' similar to TR:O14517 O14517 SMRP.;
8047	17938	28187	3.08	3.0E-12	U37672.1	NT	Human prostate specific antigen gene, 5' flanking region
8047	17938	28188	3.08	3.0E-12	U37672.1	NT	Human prostate specific antigen gene, 5' flanking region
3421	13338	28143	1.03	2.0E-12	J01884.1	NT	Mus musculus keratin-associated protein 6.2 (Krtap6-2), mRNA
4025	13928	23704	1.04	2.0E-12	J01884.1	NT	Rat U3A small nuclear RNA
4025	13928	23705	1.04	2.0E-12	J01884.1	NT	Rat U3A small nuclear RNA
4324	14221		1.8	2.0E-12	BE063509.1	EST_HUMAN	CM0-BT0281-031199-087-a03 BT0281 Homo sapiens cDNA
4804	14688	24473	0.78	2.0E-12	O70306	SWISSPROT	TBX15 PROTEIN (T-BOX PROTEIN 15)
4804	14688	24474	0.78	2.0E-12	O70306	SWISSPROT	TBX15 PROTEIN (T-BOX PROTEIN 15)
5898	15804		2.22	2.0E-12	AW971857.1	EST_HUMAN	EST383946 IMAGE resequences, MAGL Homo sapiens cDNA
6258	16124	26277	3.34	2.0E-12	T08169.1	EST_HUMAN	EST06060 Infant Brain, Bento Soares Homo sapiens cDNA clone HIBBA13 5' end
6516	16375	26552	2.07	2.0E-12	11422229	NT	Homo sapiens Ac-like transposable element (ALTE), mRNA
7367	17345		1.68	2.0E-12	AF196864.1	NT	Homo sapiens putative BPES syndrome breakpoint region protein gene, complete cds
7737	17687		8.13	2.0E-12	BE165980.1	EST_HUMAN	MF3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
9175	18916		1.71	2.0E-12	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
9377	19041		1.52	2.0E-12	11418248	NT	Homo sapiens sulfotransferase-related protein (SULTX3), mRNA
117	10095	19914	1.82	1.0E-12	AW627674.1	EST_HUMAN	hh90a09.x1 NCL CGAP_GU1 Homo sapiens cDNA clone IMAGE:2970040 3' similar to contains MER18.t1 MER18 repetitive element.;
1944	11839		2.03	1.0E-12	AB171726.1	EST_HUMAN	wm5107.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2439493 3' similar to contains L1.b3 L1 repetitive element.;
3032	12980	22752	1.16	1.0E-12	AF000991.1	NT	Homo sapiens testis-specific Testis Transcript Y2 (TTY2) mRNA, partial cds

Page 165 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3032	12960	22753	1.16	1.0E-12	AF000991.1	NT	Homo sapiens testis-specific Testis Transcript Y 2 (TTY2) mRNA, partial cds
3798	13710	23496	27.7	1.0E-12	AU132248.1	EST_HUMAN	AU132248 NT2RP3 Homo sapiens cDNA clone NT2RP3004070 5'
3798	13710	23497	27.7	1.0E-12	AU132248.1	EST_HUMAN	AU132248 NT2RP3 Homo sapiens cDNA clone NT2RP3004070 5'
5630	15544		1.73	1.0E-12	U62826.1	NT	Homo sapiens ataxia telangiectasia (ATM) gene, complete cds
5682	15591		1.82	1.0E-12	Q9Y2G7	SWISSPROT	HYPOTHETICAL ZINC FINGER PROTEIN KIAA0961
6224	16090	26240	1.72	1.0E-12	AF196864.1	NT	Homo sapiens putative BPES syndrome breakpoint region protein gene, complete cds
6240	16106	26256	9.11	1.0E-12	A1248533.1	EST_HUMAN	qh66a04.x1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1849614 3' similar to gb:M19503 LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (HUMAN); contains MER10.t1 MER10 repetitive element;
6240	16106	26257	9.11	1.0E-12	A1248533.1	EST_HUMAN	qh66a04.x1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1849614 3' similar to gb:M19503 LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (HUMAN); contains MER10.t1 MER10 repetitive element;
7051	16928	27119	1.31	1.0E-12	AA782323.1	EST_HUMAN	ac26d05.s1 Stratagene ovary (#937217) Homo sapiens cDNA clone IMAGE:857577 3'
9085	18860	29118	3.36	1.0E-12	AW962164.1	EST_HUMAN	EST1374237 MAGE resequences, MAGG Homo sapiens cDNA
9605	19728		2.2	1.0E-12	P44836	SWISSPROT	PROBABLE TONB-DEPENDENT RECEPTOR HI0712 PRECURSOR
9635	19426		2.72	1.0E-12	X85949.1	NT	M.setulosus mitochondrial 12S rRNA gene
3575	13489		1.13	9.0E-13	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
3655	13776	23570	1.16	9.0E-13	AB029900.1	NT	Homo sapiens CST gene for cerebroside sulfotransferase, exon 1, 2, 3, 4, 5
7537	17388		2.37	9.0E-13	N69653.1	EST_HUMAN	za26b06.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:293651 3'
700	10633	20458	5.05	8.0E-13	U29185.1	NT	Homo sapiens prion protein (PrP) gene, complete cds
700	10633	20459	5.05	8.0E-13	U29185.1	NT	Homo sapiens prion protein (PrP) gene, complete cds
1796	11694	21570	1.36	8.0E-13	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (naip) and survival molar neuron protein (smn) genes, complete cds
7838	17688		2.13	8.0E-13	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
8984	18789	29079	2.49	8.0E-13	U66060.1	NT	Human germ-line T-cell receptor beta chain TCRBV13S1, TCRBV6S8A2T, TCRBV5S8A3N2T, TCRBV13S8A2T, TCRBV6S9P, TCRBV5S3A2T, TCRBV13S8P, TCRBV6S3A1N1T, TCRBV5S2, TCRBV6S6A2T, TCRBV5S7P, TCRBV13S4, TCRBV6S2A1N1T, TCRBV5S4A2T, TCRBV6S4A1, TCRBV23S1A2T, TCRBV12-
9550	19149		10.33	7.0E-13	BE778223.1	EST_HUMAN	601463285F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866613 5'
9768	19287		1.33	7.0E-13	Q10473	SWISSPROT	POLYPEPTIDE N-ACETYL GALACTOSAMINYLTRANSFERASE (PROTEIN-UDP ACETYL GALACTOSAMINYLTRANSFERASE) (UDP-GALNAC:POLYPEPTIDE, N-ACETYL GALACTOSAMINYLTRANSFERASE) (GALNAC-T1)
2054	11944	21840	18.51	6.0E-13	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007

Page 166 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3290	13207		1.05	5.0E-13	R78338.1	EST_HUMAN	y82f04.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:145759 5'
3351	13271		1.45	5.0E-13	AA435773.1	EST_HUMAN	z177a12.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728350 3' similar to contains Alu repetitive element; contains element MER22 repetitive element;
8284	18115	28367	2.75	5.0E-13	P07313	SWISSPROT	MYOSIN LIGHT CHAIN KINASE, SKELETAL MUSCLE (MLCK)
1824	11721		2.96	4.0E-13	AW378614.1	EST_HUMAN	PM2-HT0224-221099-001-e11 HT0224 Homo sapiens cDNA
2411	12288		1.58	4.0E-13	AF003529.1	NT	Homo sapiens glycican 3 (GPC3) gene, partial cds and flanking repeat regions
5430	15350	25404	4.86	4.0E-13	BE169131.1	EST_HUMAN	PM3-HT0520-230200-002-c08 HT0520 Homo sapiens cDNA
6278	16142	26298	1.92	4.0E-13	AB037750.1	NT	Homo sapiens mRNA for KIAA1329 protein, partial cds
6542	16400		1.52	4.0E-13	N44291.1	EST_HUMAN	y33g05.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:273080 5' similar to PIR:A32895 A32895 t complex sterility protein - mouse;
7757	17607	27831	4.57	4.0E-13	AI289831.1	EST_HUMAN	qr32d05.x1 NCL_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:189945 3' similar to contains Alu repetitive element;
8507	18379	28645	1.83	4.0E-13	AA435819.1	EST_HUMAN	z178g10.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728514 3'
8507	18379	28646	1.83	4.0E-13	AA435819.1	EST_HUMAN	z178g10.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728514 3'
173	10144		3.8	3.0E-13	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
847	10774		1.37	3.0E-13	AA430310.1	EST_HUMAN	zw68g08.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:781406 5'
2319	12200	22099	1.25	3.0E-13	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
2429	12306		2.63	3.0E-13	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
2629	12497	22387	4.23	3.0E-13	BF372962.1	EST_HUMAN	GM3-F10100-140700-242-f08 FT0100 Homo sapiens cDNA
3150	13075		2.86	3.0E-13	AA745844.1	EST_HUMAN	ob18d02.s1 NCL_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1324035 3'
6601	16481	26669	5.92	3.0E-13	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenoleukodystrophy protein >
8064	17955		4.03	3.0E-13	AI064768.1	EST_HUMAN	HA0536 Human fetal liver cDNA library Homo sapiens cDNA
8403	18279	28531	3.66	3.0E-13	BE063509.1	EST_HUMAN	GM0-BT0281-031199-087-a03 BT0281 Homo sapiens cDNA
8876	18688	28980	2.6	3.0E-13	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
144	10118	19938	2.77	2.0E-13	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenoleukodystrophy protein >
239	10207	20024	1.31	2.0E-13	U23839.1	NT	Danio rerio fibroblast growth factor receptor 4 mRNA, complete cds
1249	11156	21005	4.71	2.0E-13	AF299710.1	NT	Homo sapiens DNA polymerase delta small subunit (POLD2) gene, exons 1 through 11 and complete cds
3244	13167	22966	1.08	2.0E-13	BF431899.1	EST_HUMAN	hab76f05.x1 Soares NSF_F8_gw_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE: 3'

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4019	13923		1.72	2.0E-13	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
5722	15629	25732	3.87	2.0E-13	Q08852	SWISSPROT	CELL SURFACE GLYCOPROTEIN 1 PRECURSOR (OUTER LAYER PROTEIN B) (S-LAYER PROTEIN 1)
6078	16061	26209	6.32	2.0E-13	X16912.1	NT	Human PFKL gene for liver-type 6-phosphofructokinase (EC 2.7.1.11) exon 2
7976	17826	28067	3.97	2.0E-13	5031896	NT	Homo sapiens mab-21 (C. elegans)-like 1 (MAB21L1) mRNA
9251	18961		7.42	2.0E-13	AW882155.1	EST_HUMAN	CMO-NN0001-100300-274-e11 NN0001 Homo sapiens cDNA
288	10252	20072	1.37	1.0E-13	S74129.1	NT	FGF-1=fibroblast growth factor 1 [human, kidney, Genomic, 342 nt, segment 2 of 2]
870	10796	20946	4.39	1.0E-13	AJ007973.1	NT	Homo sapiens LGMD2B gene
1314	11220	21077	1.27	1.0E-13	X87344.1	NT	H.sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DOB2 and RING8, 9, 13 and 14 genes
1976	11869	21761	2.16	1.0E-13	AA720574.1	EST_HUMAN	nw21g02.s1 NCI_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains THR.f3
4488	14382	24169	1.48	1.0E-13	BF340987.1	EST_HUMAN	THR repetitive element ;
8684	18572	28855	13.83	1.0E-13	BF108755.1	EST_HUMAN	602038009F1 NCI_CGAP_Brn64 Homo sapiens cDNA clone IMAGE:4185866 5'
9076	18853		1.62	1.0E-13	AV715377.1	EST_HUMAN	7145e10.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3524443 3' similar to contains MER29.b2 MER29 repetitive element ;
9714	19255		1.6	1.0E-13	AJ271735.1	NT	AV715377 DCB Homo sapiens cDNA clone DCBAIE03 5'
330	10289	20105	2.92	9.0E-14	AA781159.1	EST_HUMAN	Homo sapiens Xq pseudautosomal region; segment 1/2
331	10290	20106	2.85	9.0E-14	AA781159.1	EST_HUMAN	aj24c01.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.11 MER19 repetitive element ;
2451	12328		4.04	9.0E-14	AW861577.1	EST_HUMAN	aj24c01.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.11 MER19 repetitive element ;
2725	12587	22482	4.62	9.0E-14	AB038162.1	NT	RC4-CT0322-080100-013-d09 CT0322 Homo sapiens cDNA
3073	13000	22790	3.74	9.0E-14	AW513296.1	EST_HUMAN	Homo sapiens TFF gene cluster for trefoil factor, complete cds
3200	10289	20105	0.98	9.0E-14	AA781159.1	EST_HUMAN	xo54h05.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2707833 3'
3728	13640	23426	5.22	9.0E-14	D14547.1	NT	aj24c01.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.11 MER19 repetitive element ;
4650	14536	24325	1.93	9.0E-14	AJ002153.1	NT	Human DNA, SINE repetitive element
3453	13369		1.57	8.0E-14	BE468263.1	EST_HUMAN	Saguinus oedipus gene for seminal vesicle secreted protein semenogelin I
3872	13783		2.77	8.0E-14	R70269.1	EST_HUMAN	hz71c09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3213424 3'
7434	16447	26637	60.69	8.0E-14	X89211.1	NT	yt72e03.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:144796 3'
7515	17303	27510	3.49	8.0E-14	AA219316.1	EST_HUMAN	H.sapiens DNA for endogenous retroviral like element
8732	18588		4.39	8.0E-14	BE062568.1	EST_HUMAN	zq17c10.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:629970 3'
							QV2-BT0258-261099-014-a01 BT0258 Homo sapiens cDNA

Page 168 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1611	12699		3.07	7.0E-14	AW151673.1	EST_HUMAN	xf67e10.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2623146 3' similar to contains MER10.12 MER10 repetitive element;
363	10319	20140	10.2	6.0E-14	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
5114	14982	24756	1.02	6.0E-14	8923548	NT	Homo sapiens hypothetical protein FLJ20585 (FLJ20585), mRNA
5114	14982	24757	1.02	6.0E-14	8923548	NT	Homo sapiens hypothetical protein FLJ20585 (FLJ20585), mRNA
7652	17502	27725	2.56	6.0E-14	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
7652	17502	27726	2.56	6.0E-14	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
602	10538	20348	3.92	5.0E-14	Q63120	SWISSPROT	CANALICULAR MULTISPECIFIC ORGANIC ANION TRANSPORTER 1 (MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN 2) (CANALICULAR MULTIDRUG RESISTANCE PROTEIN)
4985	14860	24628	1.09	5.0E-14	AW073791.1	EST_HUMAN	xb03a05.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2575185 3' similar to contains L1 L2 L1 repetitive element;
5397	15316	25363	5.12	5.0E-14	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
1107	12685		1.77	4.0E-14	P04928	SWISSPROT	S-ANTIGEN PROTEIN PRECURSOR
1835	11732	21608	6.5	4.0E-14	AJ007973.1	NT	Homo sapiens LGMD2B gene
3693	13607		0.94	4.0E-14	AA046502.1	EST_HUMAN	zk67a06.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:487858 5'
4194	14094	23873	1	4.0E-14	N46328.1	EST_HUMAN	yy73c12.s1 Soares_multiple_sclerosis_2NBHMSP Homo sapiens cDNA clone IMAGE:279190 3' similar to contains L1 L3 L1 repetitive element;
9777	19760		2.31	4.0E-14	A1886224.1	EST_HUMAN	wm08c03.x1 NCI_CGAP_Uk4 Homo sapiens cDNA clone IMAGE:2435332 3' similar to contains Alu repetitive element;
934	10859	20705	2.13	3.0E-14	X95466.1	NT	R.norvegicus mRNA for CPG2 protein
4841	14722	24505	0.82	3.0E-14	AW265354.1	EST_HUMAN	xp45f12.x1 NCI_CGAP_HN11 Homo sapiens cDNA clone IMAGE:2743343 3' similar to contains Alu repetitive element; contains element MER9 repetitive element;
4844	14725	24507	1.1	3.0E-14	7656864	NT	Homo sapiens a disintegrin and metalloproteinase domain 29 (ADAM29), mRNA
5104	14972		1.23	3.0E-14	BE466372.1	EST_HUMAN	hx94f11.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3195501 3' similar to contains MER4.b2 MER4 repetitive element;
5157	15024	24791	1.5	3.0E-14	P02894	SWISSPROT	CIRCUMSPOROZOITE PROTEIN PRECURSOR (CS)
8563	14722	24505	7.59	3.0E-14	AW265354.1	EST_HUMAN	xp45f12.x1 NCI_CGAP_HN11 Homo sapiens cDNA clone IMAGE:2743343 3' similar to contains Alu repetitive element; contains element MER9 repetitive element;
384	10331	20154	3.98	2.0E-14	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
384	10331	20155	3.98	2.0E-14	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
675	12673	20428	6.35	2.0E-14	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2339	12219		1.36	2.0E-14	AW372868.1	EST_HUMAN	RC5-BT0377-091299-031-D12 BT0377 Homo sapiens cDNA
2416	12293		1.09	2.0E-14	7557529	NT	Homo sapiens rhabdoid tumor deletion region protein 1 (RTDR1), mRNA
2479	12355	22246	1.24	2.0E-14	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
2640	12507		0.95	2.0E-14	P06548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
5505	15423	25485	2.96	2.0E-14	U01317.1	NT	Human beta globin region on chromosome 11
6114	18008		2.18	2.0E-14	BE000550.1	EST_HUMAN	RC3-BN0072-240200-011-a06 BN0072 Homo sapiens cDNA
6432	18293	26454	19.91	2.0E-14	BE158761.1	EST_HUMAN	IL2-HT0397-071299-024-D04 HT0397 Homo sapiens cDNA
6432	18293	26455	19.91	2.0E-14	BE158761.1	EST_HUMAN	IL2-HT0397-071299-024-D04 HT0397 Homo sapiens cDNA
8160	18048	28300	4.76	2.0E-14	AW139800.1	EST_HUMAN	UI-H-BI1-adv-a-10-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2718234 3'
8791	15423	25485	1.81	2.0E-14	U01317.1	NT	Human beta globin region on chromosome 11
1051	10968	20810	1.31	1.0E-14	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
1384	11289	21143	7.67	1.0E-14	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
1384	11289	21144	7.67	1.0E-14	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
1956	11851	21738	21.54	1.0E-14	L44140.1	NT	Homo sapiens chromosome X region from filamin (FLN) gene to glucose-6-phosphate dehydrogenase (G6PD) gene, complete cds's
2137	12025	21921	6.17	1.0E-14	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2358	12238	22134	6.43	1.0E-14	AF001689.1	NT	Homo sapiens ribosomal protein L23A (RPL23A) gene, complete cds
2914	12841	22641	1.38	1.0E-14	P06527	SWISSPROT	HISTIDINE-RICH PROTEIN PRECURSOR (CLONE PFHRP-II)
3130	13055	22854	4.67	1.0E-14	BF335227.1	EST_HUMAN	RC2-CT0432-310700-013-a09_1 CT0432 Homo sapiens cDNA
3130	13055	22855	4.67	1.0E-14	BF335227.1	EST_HUMAN	RC2-CT0432-310700-013-a09_1 CT0432 Homo sapiens cDNA
3811	13723	23512	2	1.0E-14	AA892994.1	EST_HUMAN	ae89c12.s1 Stragene schizo brain S11 Homo sapiens cDNA clone IMAGE:971350 3'
4374	14270	24051	1.74	1.0E-14	AW275852.1	EST_HUMAN	xq39h10.x1 NCI_CGAP_Lu28 Homo sapiens cDNA clone IMAGE:2753059 3'
5550	15466	25536	1.97	1.0E-14	AF126145.1	NT	Bos taurus xenobiotic/medium-chain fatty acid:CoA ligase form XL-III mRNA, nuclear mRNA encoding mitochondrial protein, complete cds
6012	19457	26045	10.41	1.0E-14	11437150	NT	Homo sapiens prominin (mouse)-like 1 (PROML1), mRNA
6012	19457	26046	10.41	1.0E-14	11437150	NT	Homo sapiens prominin (mouse)-like 1 (PROML1), mRNA
1558	11463	21320	2.85	9.0E-15	7427522	NT	Homo sapiens protein tyrosine phosphatase, receptor type, T (PTPRT), mRNA
2126	12014		1.64	9.0E-15	AF196779.1	NT	Homo sapiens transcription factor IGHM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds; and L-type calcium channel a2
6427	16288	26449	4.28	9.0E-15	P21416	SWISSPROT	GAG POLYPROTEIN [CONTAINS: CORE PROTEINS P15, P12, P30, P10]
6673	16553	26748	1.53	9.0E-15	BE903559.1	EST_HUMAN	60167750F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3960156 5'
2780	10415		1	8.0E-15	BE261482.1	EST_HUMAN	601148632F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3164023 5'

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7963	17813		2.83	7.0E-15	AW241958.1	EST_HUMAN	xn77d02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2700483 3' similar to contains THR12 THR repetitive element;
978	10901	20748	6.12	6.0E-15	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region; segment 2/2
8622	19770		1.86	6.0E-15	AW836843.1	EST_HUMAN	QV1-LT0036-150200-070-c10 LT0036 Homo sapiens cDNA
9948	19415		1.57	6.0E-15	BF432200.1	EST_HUMAN	nab81c12.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE: 3'
404	10350	20177	5.79	5.0E-15	AL163208.2	NT	Homo sapiens chromosome 21 segment HS21C008
2733	12595	22490	1.38	5.0E-15	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RoRet gene, and sodium phosphate transporter (NP73) gene, complete cds
3423	13340		1	5.0E-15	AW296817.1	EST_HUMAN	UI-H-BW0-ajb-g-10-0.U1.s1 NCL_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2731219 3'
8063	17954		2.22	5.0E-15	AV730056.1	EST_HUMAN	AV730056 HTF Homo sapiens cDNA clone HTFAVE06 5'
421	9988	19779	2.6	4.0E-15	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
4039	13942	23720	0.78	4.0E-15	AL118596.1	EST_HUMAN	DKFZp761C0810_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761C0810 5'
8414	16438	26623	2.38	4.0E-15	AJ130894.1	NT	Homo sapiens mRNA for transcription factor
8414	16438	26624	2.38	4.0E-15	AJ130894.1	NT	Homo sapiens mRNA for transcription factor
4123	14023		5.93	3.0E-15	N89452.1	EST_HUMAN	LY1142F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone LY1142 5' similar to ANF(CARDIODILATIN)
4843	14724		1.41	3.0E-15	P92485	SWISSPROT	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 5
4955	14832	24599	0.88	3.0E-15	AA078097.1	EST_HUMAN	7P01F03 Chromosome 7 Placental cDNA Library Homo sapiens cDNA clone 7P01F03
4955	14832	24600	0.88	3.0E-15	AA078097.1	EST_HUMAN	7P01F03 Chromosome 7 Placental cDNA Library Homo sapiens cDNA clone 7P01F03
6314	16177	26335	2.86	3.0E-15	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
6314	16177	26336	2.86	3.0E-15	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
7709	17559		1.87	3.0E-15	AA807128.1	EST_HUMAN	cc36a07.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1351764 3' similar to contains MER19.t1
8173	18061	28311	2.71	3.0E-15	AB026898.1	NT	MER19 repetitive element;
250	10216	20033	3.29	2.0E-15	AF223391.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
364	10320	20141	3.23	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
364	10320	20142	3.23	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
1512	11417		1.14	2.0E-15	8923201	NT	Homo sapiens hypothetical protein FLJ20212 (FLJ20212), mRNA

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3465	13381	23186	1.04	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
3465	13381	23187	1.04	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
4522	14415		2.07	2.0E-15	AI806335.1	EST_HUMAN	wf07f06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2349923 3' similar to TR:Q61043
5097	14966	24741	1.33	2.0E-15	P13993	SWISSPROT	Q61043 NINEIN. ;
5097	14966	24742	1.33	2.0E-15	P13993	SWISSPROT	REPETITIVE PROLINE-RICH CELL WALL PROTEIN 2 PRECURSOR
6223	16089		1.71	2.0E-15	AJ400877.1	NT	REPETITIVE PROLINE-RICH CELL WALL PROTEIN 2 PRECURSOR
6310	16173	26331	2.2	2.0E-15	AA704195.1	EST_HUMAN	Homo sapiens ASCL3 gene, CEGP1 gene, C11orf14 gene, C11orf15 gene, C11orf16 gene and C11orf17 gene
6375	16237	26397	5.13	2.0E-15	W05064.1	EST_HUMAN	zj77e03.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:460924 3'
7163	17040	27232	2.72	2.0E-15	D14547.1	NT	za78d10.r1 Soares_fetal_lung_NHL19W Homo sapiens cDNA clone IMAGE:298675 5' similar to WP:F44F4.8 CE02227 TRANSPOSASE ;
7410	17277	27484	1.26	2.0E-15	AW379465.1	EST_HUMAN	Human DNA, SINE repetitive element
7410	17277	27485	1.26	2.0E-15	AW379465.1	EST_HUMAN	CMO-HT0244-201099-078-a12 HT0244 Homo sapiens cDNA
8212	18096		3.01	2.0E-15	AJ271735.1	NT	CMO-HT0244-201099-078-a12 HT0244 Homo sapiens cDNA
9799	13381	23186	2.22	2.0E-15	AF223391.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
9799	13381	23187	2.22	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
2747	12809		1.84	1.0E-15	AI699984.1	EST_HUMAN	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
2979	12906	22706	0.8	1.0E-15	BE043584.1	EST_HUMAN	6x26h05.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2270745 3' similar to TR:Q13539 Q13539 MARINER TRANSPOSASE. ;
3103	13029	22825	0.99	1.0E-15	P08547	SWISSPROT	h40e02.y1 NCI_CGAP_Ov84 Homo sapiens cDNA clone IMAGE:2999162 5'
4262	14161	23939	0.8	1.0E-15	BE182696.1	EST_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
5096	14966	24731	1.15	1.0E-15	AI984928.1	EST_HUMAN	RC3-HT0649-100500-022-b05 HT0649 Homo sapiens cDNA
5844	15750	25864	1.83	1.0E-15	T95763.1	EST_HUMAN	wf8e04.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2494590 3'
6182	16068		1.96	1.0E-15	BE074217.1	EST_HUMAN	ye40e10.s1 Soares_fetal_liver_spleen_1NFLS Homo sapiens cDNA clone IMAGE:120234 3' similar to contains MER6 repetitive element ;
6791	16670	26862	1.28	1.0E-15	AL163280.2	NT	QV3-BT0569-270100-074-g05 BT0569 Homo sapiens cDNA
6905	16783	26976	4.57	1.0E-15	AI200976.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C080
6905	16783	26977	4.57	1.0E-15	AI200976.1	EST_HUMAN	qf88h06.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1755227 3'
7227	17104	27293	1.44	1.0E-15	4507208	NT	qf88h06.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1755227 3'
							Homo sapiens spermidine synthase (SRM) mRNA

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8193	19079	28331	6.81	1.0E-15	AF044083.1	NT	Homo sapiens major histocompatibility locus class III region
9867	19492	25131	3.71	1.0E-15	AI783944.1	EST_HUMAN	tr31c05.x1 NC1_CGAP_Ov23 Homo sapiens cDNA clone IMAGE:2219912 3' similar to contains Alu repetitive element;
4404	14298	24082	1.03	9.0E-16	4503168	NT	Homo sapiens cut (Drosophila)-like 1 (CCAT displacement protein) (CUTL1) mRNA
8361	18238	28486	2.6	9.0E-16	F08688.1	EST_HUMAN	HSC23F051 normalized infant brain cDNA Homo sapiens cDNA clone c-23f05
6343	16206	26368	1.5	7.0E-16	O88807	SWISSPROT	PROTEIN-ARGININE DEIMINASE TYPE IV (PEPTIDYLARGININE DEIMINASE IV) (PAD-R4)
6343	16206	26369	1.5	7.0E-16	O88807	SWISSPROT	PROTEIN-ARGININE DEIMINASE TYPE IV (PEPTIDYLARGININE DEIMINASE IV) (PAD-R4)
9816	19585		6.8	7.0E-16	T04149.1	EST_HUMAN	ye28c12.11 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:119062 5'
2094	11983		8.32	6.0E-16	AW972611.1	EST_HUMAN	EST384702 MAGL Homo sapiens cDNA
1477	11382	21246	1.09	5.0E-16	AJ251154.1	NT	Mus musculus olfactory receptor cluster, OR37A, OR37B, OR37C, OR37E genes and OR37D pseudogene
2647	12514	22404	1.79	5.0E-16	AA992176.1	EST_HUMAN	cd80c04.s1 Soares total fetus Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1623078 3' similar to contains element L1 repetitive element;
7784	17634	27867	1.69	5.0E-16	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8809	18623	28914	3.33	5.0E-16	BF217368.1	EST_HUMAN	601885734F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4104129 5'
9904	19381		8.34	5.0E-16	11418127	NT	Homo sapiens GTP binding protein 1 (GTPBP1), mRNA
2192	12079		1.27	4.0E-16	AB001523.1	NT	Homo sapiens gene for TMEM1 and PWP2, complete and partial cds
2328	12209	22107	1.32	4.0E-16	AW797188.1	EST_HUMAN	QV1-UM0036-200300-115-g02 UM0036 Homo sapiens cDNA
2328	12209	22108	1.32	4.0E-16	AW797188.1	EST_HUMAN	QV1-UM0036-200300-115-g02 UM0036 Homo sapiens cDNA
3411	13328	23129	3.85	4.0E-16	Q16653	SWISSPROT	MYELIN-OLIGODENDROCYTE GLYCOPROTEIN PRECURSOR
4050	13952	23728	3.55	4.0E-16	BE083875.1	EST_HUMAN	PM4-BT0650-010400-002-g09 BT0650 Homo sapiens cDNA
4050	13952	23729	3.55	4.0E-16	BE083875.1	EST_HUMAN	PM4-BT0650-010400-002-g09 BT0650 Homo sapiens cDNA
5092	14962	24737	1	4.0E-16	P08548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
6538	16396	26575	33.8	4.0E-16	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
7358	17226	27425	1.22	4.0E-16	11423191	NT	Homo sapiens hypothetical protein FLJ10024 (FLJ10024), mRNA
8551	18421	28691	1.74	4.0E-16	AV730030.1	EST_HUMAN	AV730030 HTF Homo sapiens cDNA clone HTFAWA03 5'
9156	18906		1.64	4.0E-16	P08548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
9244	18957		5.94	4.0E-16	C05947.1	EST_HUMAN	C05947 Human pancreatic islet Homo sapiens cDNA clone hbc5355
9255	18964	25319	2.04	4.0E-16	6912459	NT	Homo sapiens Gp12-associated binder 2 (KIAA0571), mRNA
128	10102	19924	1.59	3.0E-16	AW022862.1	EST_HUMAN	df45c01.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2486376 5'
128	10102	19925	1.59	3.0E-16	AW022862.1	EST_HUMAN	df45c01.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2486376 5'
458	10402		1.47	3.0E-16	AL046445.1	EST_HUMAN	DKFZp434P037_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434P037 5'

Table 4
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
467	10410		1.6	3.0E-16	AF135446.1	NT	Homo sapiens TSX (TSX) pseudogene, exon 5
1436	11341	21207	2.01	3.0E-16	Q28983	SWISSPROT	ZONADHESIN PRECURSOR
2946	12873	22670	4.05	3.0E-16	P03200	SWISSPROT	ENVELOPE GLYCOPROTEIN GP340 (MEMBRANE ANTIGEN) (MA) [CONTAINS: GLYCOPROTEIN GP220]
3874	13785		8.18	3.0E-16	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
3875	13786		0.99	3.0E-16	U03887.1	NT	Human BXP20 gene
4861	14741	24521	1.01	3.0E-16	AV661393.1	EST_HUMAN	AV661393 GLC Homo sapiens cDNA clone GLGSA01 3'
5452	15373	25431	1.41	3.0E-16	AF003529.1	NT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
7031	16908	27098	4.72	3.0E-16	AI002836.1	EST_HUMAN	am98h05.s1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:1684185 3' similar to contains THR.b2 THR repetitive element ;
7691	17541		1.27	3.0E-16	BF690617.1	EST_HUMAN	602246538F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4332032 5'
7828	17678	27922	3.08	3.0E-16	L78810.1	NT	Homo sapiens ADPIATP carrier protein (ANT-2) gene, complete cds
956	10880		1.18	2.0E-16	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079
2337	12217		0.96	2.0E-16	AA0821761.1	EST_HUMAN	af06d04.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1030855 3'
2657	12524		1.71	2.0E-16	U03061.1	NT	Human SSAV-related endogenous retroviral LTR-like element
4087	13987	23764	1.33	2.0E-16	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
6646	16526	26720	1.63	2.0E-16	AI732837.1	EST_HUMAN	nz47706.x5 NCL_CGAP_P112 Homo sapiens cDNA clone IMAGE:1290947 similar to TR:O54849 O54849 HYPOPHETICAL 42.9 KD PROTEIN. [2] TR:O08905 contains MER7.1 MER7 repetitive element ;
178	10149	19963	2.55	1.0E-16	AF200719.1	NT	Homo sapiens pituitary tumor transforming gene protein (PTTG) gene, complete cds
377	10361		22.41	1.0E-16	AA628892.1	EST_HUMAN	af39g11.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1034084 3' similar to contains OFR.12 OFR repetitive element ;
1928	11823	21704	2.44	1.0E-16	BF527942.1	EST_HUMAN	QV0-BN0148-070700-293-a10 BN0148 Homo sapiens cDNA
5877	13783		23.72	1.0E-16	U45983.1	NT	Homo sapiens COR8 chemokine receptor (CMKBR8) gene, complete cds
5960	16865	25987	2.81	1.0E-16	Q02779	SWISSPROT	MITOGEN-ACTIVATED PROTEIN KINASE KINASE 10 (MIXED LINEAGE KINASE 2) (PROTEIN KINASE MST)
6458	15783		6.59	1.0E-16	U45983.1	NT	Homo sapiens COR8 chemokine receptor (CMKBR8) gene, complete cds
7349	17217	27416	1.31	1.0E-16	AW875681.1	EST_HUMAN	QV2-P10012-040400-124-e05 P10012 Homo sapiens cDNA
3679	13593	23379	2.54	9.0E-17	AW900048.1	EST_HUMAN	CM1-NN1003-200300-153-e01 NN1003 Homo sapiens cDNA
6035	15938		2.02	9.0E-17	AI392984.1	EST_HUMAN	ig22c11.x1 NCL_CGAP_CELL1 Homo sapiens cDNA clone IMAGE:2108524 3' similar to contains MER28.12 MER28 repetitive element ;
6720	16600		4.87	9.0E-17	AW150257.1	EST_HUMAN	xg49g12.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:2630950 3' similar to contains OFR.12 OFR repetitive element ;

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7870	17720		2.18	9.0E-17	AF200719.1	NT	Homo sapiens pituitary tumor transforming gene protein (PTTG) gene, complete cds
1001	10919		1.7	8.0E-17	AW880701.1	EST_HUMAN	QV0-OT0032-080300-155-d01 OT0032 Homo sapiens cDNA
3817	13729		0.87	8.0E-17	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
5427	19444	25402	3.56	8.0E-17	BE172081.1	EST_HUMAN	MRO-HIT0559-060300-003-e04 HT0559 Homo sapiens cDNA
6311	16174		1.36	8.0E-17	AV730759.1	EST_HUMAN	AV730759 HTF Homo sapiens cDNA clone HTFAQB07 5'
1442	11347		3.18	7.0E-17	6753097	NT	Mus musculus apolipoprotein B editing complex 2 (ApoBc2), mRNA
5262	15184		3.05	7.0E-17	AF216950.1	NT	Homo sapiens putative MITAF (MITAF) mRNA, partial cds, alternatively spliced
							Mus musculus WNT-2 gene, partial cds; putative ankyrin-related protein and cystic fibrosis transmembrane conductance regulator (CFTR) genes, section 1 of 2 of the complete cds; and unknown gene
6017	15921	26052	6.83	7.0E-17	AF229843.1	NT	RC1-HN0003-220300-021-b04 HN0003 Homo sapiens cDNA
196	10168	19986	4.78	6.0E-17	AW983880.1	EST_HUMAN	h181d04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2978695 3' similar to contains L1.12
5812	15717	25830	1.61	6.0E-17	AW662772.1	EST_HUMAN	L1 repetitive element;
415	9982	19773	2.31	5.0E-17	T64110.1	EST_HUMAN	yc05f08.r1 Stratiogene lung (#937210) Homo sapiens cDNA clone IMAGE:79839 5'
6476	16335	26502	2.07	5.0E-17	T81043.1	EST_HUMAN	yd26b04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:109327 5'
8783	18598	28897	2.12	4.0E-17	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
							ov45e04.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1640286 3' similar to TR:Q16530
9171	18914		1.98	4.0E-17	A1073546.1	EST_HUMAN	Q16530 PMS3 MRNA ;contains MER10.12 MER10 repetitive element ;
2051	11941	21836	1.35	3.0E-17	AW119123.1	EST_HUMAN	xd89c09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2604784 3'
3157	13082		1.31	3.0E-17	P35410	SWISSPROT	MAS-RELATED G PROTEIN-COUPLED RECEPTOR MRG
3590	13504	23293	1.14	3.0E-17	BE326522.1	EST_HUMAN	hw05b04.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3181999 3'
3590	13504	23294	1.14	3.0E-17	BE326522.1	EST_HUMAN	hw05b04.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3181999 3'
							Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
7594	17445	27660	4.72	3.0E-17	AB026898.1	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
9134	18980		3.16	3.0E-17	11417966	NT	AV720204 GLC Homo sapiens cDNA clone GLC01F08 5'
9909	19386		15.82	3.0E-17	AV720204.1	EST_HUMAN	qt63a06.x1 NCL_CGAP_Eso2 Homo sapiens cDNA clone IMAGE:1959922 3' similar to contains Alu repetitive element;
350	10309	20127	2.81	2.0E-17	AI270080.1	EST_HUMAN	qt63a06.x1 NCL_CGAP_Eso2 Homo sapiens cDNA clone IMAGE:1959922 3' similar to contains Alu repetitive element;
351	10309	20127	2	2.0E-17	AI270080.1	EST_HUMAN	zg81d04.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:399751 3'
972	10896		1.27	2.0E-17	AA722932.1	EST_HUMAN	ZONADIESIN PRECURSOR
2397	12275	22170	2.6	2.0E-17	Q28983	SWISSPROT	ZONADIESIN PRECURSOR
2397	12275	22171	2.6	2.0E-17	Q28983	SWISSPROT	ZONADIESIN PRECURSOR

Page 175 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2899	12826	22621	5.62	2.0E-17	P12036	SWISSPROT	NEUROFILAMENT TRIPLET H PROTEIN (200 KDA NEUROFILAMENT PROTEIN) (NEUROFILAMENT HEAVY POLYPEPTIDE) (NF-H)
5295	15216	25017	1.95	2.0E-17	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
5295	15216	25018	1.95	2.0E-17	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
5790	15696		2.07	2.0E-17	AF055066.1	NT	Homo sapiens MHC class 1 region
6711	16591	26779	1.44	2.0E-17	Q95156	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN OLF3
6925	16803	26997	1.38	2.0E-17	AA300640.1	EST_HUMAN	EST13504 Testis tumor Homo sapiens cDNA 5' end similar to similar to glycogenin
7699	17549	27772	2.72	2.0E-17	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
7699	17549	27773	2.72	2.0E-17	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
7887	17737	27981	5.3	2.0E-17	D13391.1	NT	Human CYP19 gene for aromatase cytochrome P-450, promoter region (containing two cis-acting transcriptional regulatory elements)
733	10665	20499	3.37	1.0E-17	P08183	SWISSPROT	MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1)
1729	11630	21499	2.45	1.0E-17	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
2069	11959	21863	1.68	1.0E-17	P02461	SWISSPROT	COLLAGEN ALPHA 1(III) CHAIN PRECURSOR
2287	12170	22067	1.46	1.0E-17	U79410.1	NT	Homo sapiens thrombospondin 2 (THBS2) gene, promoter region and exons 1A and 1B
3519	13435		1.01	1.0E-17	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
4045	13947		7.17	1.0E-17	R09942.1	EST_HUMAN	yf30e07.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:128388 5'
5885	15792		4.7	1.0E-17	AW468468.1	EST_HUMAN	he38e05.x1 NCL CGAP_CML1 Homo sapiens cDNA clone IMAGE:2921312 3' similar to contains Alu repetitive element; contains LTR8.t1 LTR8 repetitive element ;
6006	15911	26037	1.44	1.0E-17	AI185642.1	EST_HUMAN	qe65b05.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1743825 3'
6006	15911	26038	1.44	1.0E-17	AI185642.1	EST_HUMAN	qe65b05.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1743825 3'
6216	16082	26232	1.32	1.0E-17	Q16831	SWISSPROT	URIDINE PHOSPHORYLASE (UDRPASE)
8719	18536	28821	2.01	1.0E-17	Q28824	SWISSPROT	MYOSIN LIGHT CHAIN KINASE, SMOOTH MUSCLE (MLCK) [CONTAINS: TELOKIN]
2422	12299	22196	0.96	9.0E-18	AA174078.1	EST_HUMAN	zp18g12.s1 Stralagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:608862 3'
7468	17328		3.26	9.0E-18	AI472167.1	EST_HUMAN	ij86d03.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2148389 3'
3718	13630	23415	1.75	8.0E-18	4758977	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
346	10305	20121	8.39	7.0E-18	AW316976.1	EST_HUMAN	xx10b04.x1 NCL CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gb:U20868 60S
346	10305	20122	8.39	7.0E-18	AW316976.1	EST_HUMAN	xx10b04.x1 NCL CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gb:U20868 60S
5136	15003	24774	0.85	7.0E-18	R16220.1	EST_HUMAN	ye49c07.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:53285 3' similar to contains L1 repetitive element ;

Page 176 of 413
Table 4
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9638	10305	20121	5.73	7.0E-18	AW316976.1	EST_HUMAN	xx10b04.x1 NCL_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gb:L20868 60S RIBOSOMAL PROTEIN L4 (HUMAN);
9638	10305	20122	5.73	7.0E-18	AW316976.1	EST_HUMAN	xx10b04.x1 NCL_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gb:L20868 60S RIBOSOMAL PROTEIN L4 (HUMAN);
3255	13178	22976	1.16	6.0E-18	X71791.2	NT	Rattus norvegicus partial Gdh/Pn-1 gene for glia-derived nexin/protease nexin I, enhancer region
4641	14529		3.37	6.0E-18	P52181	SWISSPROT	PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE (TISSUE TRANSGLUTAMINASE) (TGASE C) (TGC)
6799	16678		2.69	6.0E-18	11428155	NT	Homo sapiens similar to high-mobility group (nonhistone chromosomal) protein 4 (H. sapiens) (LOC63446), mRNA
8476	18349	28614	1.75	6.0E-18	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8642	18506	28784	1.78	6.0E-18	X87344.1	NT	H. sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DQB2 and RING8, 9, 13 and 14 genes
9394	19032	25308	3.66	6.0E-18	U87929.1	NT	Human acornitase hydratase (ACO2) gene, exon 4
1130	11044	20886	14.74	5.0E-18	AI280214.1	EST_HUMAN	qm65g11.x1 Soares, placenta, 8to9weeks, 2NbHP8t69W Homo sapiens cDNA clone IMAGE:1893688 3' similar to contains Alu repetitive element;
4217	14115	23893	0.92	5.0E-18	10946665	NT	Mus musculus gasdermin (Gsdm), mRNA
5058	14928	24700	1.76	5.0E-18	D61517.1	EST_HUMAN	HUM411F05B Clontech human fetal brain polyA+ mRNA (#6535) Homo sapiens cDNA clone GEN-411F05 5'
5224	15147	24914	1.38	5.0E-18	AF087913.1	NT	Human endogenous retrovirus HERV-P-T47D
7061	16938	27128	4.26	5.0E-18	BE143312.1	EST_HUMAN	M/R0-HT0161-221039-002-c06 HT0161 Homo sapiens cDNA
8346	18223	28474	4.33	5.0E-18	10242378	NT	Homo sapiens lymphocyte activation-associated protein (LOC51088), mRNA
8346	18223	28475	4.33	5.0E-18	10242378	NT	Homo sapiens lymphocyte activation-associated protein (LOC51088), mRNA
9512	19125		5.3	5.0E-18	AW867182.1	EST_HUMAN	MR1-SN0035-060400-001-g11 SN0035 Homo sapiens cDNA
9837	19336		13	5.0E-18	AV650547.1	EST_HUMAN	AV650547 GLC Homo sapiens cDNA clone GLOCGA02 3'
119	10096	19915	1.36	4.0E-18	BE044076.1	EST_HUMAN	ho36h04.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3 MER29 repetitive element;
119	10096	19916	1.36	4.0E-18	BE044076.1	EST_HUMAN	ho36h04.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3 MER29 repetitive element;
1846	11742		1.08	4.0E-18	AI738592.1	EST_HUMAN	wt36h08.x1 NCL_CGAP_Co16 Homo sapiens cDNA clone IMAGE:2392095 3'
2154	12042	21940	0.98	4.0E-18	Q06430	SWISSPROT	N-ACETYLACTOSAMINIDE BETA-1,6-N-ACETYLGLUCOSAMINYLTRANSFERASE (N-ACETYLGLUCOSAMINYLTRANSFERASE) (I-BRANCHING ENZYME) (IGNT)
2154	12042	21941	0.98	4.0E-18	Q06430	SWISSPROT	N-ACETYLACTOSAMINIDE BETA-1,6-N-ACETYLGLUCOSAMINYLTRANSFERASE (N-ACETYLGLUCOSAMINYLTRANSFERASE) (I-BRANCHING ENZYME) (IGNT)
5293	15214	25014	2.55	4.0E-18	AI017565.1	EST_HUMAN	cu23e06.x1 Soares, NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1627138 3'

Page 177 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5293	15214	25015	2.55	4.0E-18	AI017565.1	EST_HUMAN	ou23e06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1627138 3'
8370	18247	28499	7.12	4.0E-18	AA371807.1	EST_HUMAN	EST83633 Pituitary gland, subtracted (prolactin/growth hormone) II Homo sapiens cDNA 5' end similar to EST containing O family repeat
831	10758	20609	2.38	3.0E-18	AA814196.1	EST_HUMAN	ob23h11.s1 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1324581 3' similar to SW:RS5_HUMAN
914	10838	20686	2.41	3.0E-18	BE086634.1	EST_HUMAN	P46782 40S RIBOSOMAL PROTEIN S6. ;
3867	13778	23571	1.19	3.0E-18	AL163247.2	NT	CM0-BT0690-210300-288-g07 BT0690 Homo sapiens cDNA
6084	16029	26169	5.2	3.0E-18	BE001671.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C047
9642	19210		4.92	3.0E-18	AW022015.1	EST_HUMAN	PM0-BN0081-100300-001-b08 BN0081 Homo sapiens cDNA
251	10217	20034	2.83	2.0E-18	AW836820.1	EST_HUMAN	df31h12.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2485126 5'
1135	11049		47.22	2.0E-18	BE256097.1	EST_HUMAN	QV1-L.T0036-150200-070-e07 LT0036 Homo sapiens cDNA
5322	15242		3.2	2.0E-18	AA866610.1	EST_HUMAN	601114352F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3355044 5'
5380	15299	25149	3.04	2.0E-18	D14547.1	NT	ak3a07.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1409652 3' similar to TR:O14577
5380	15299	25150	3.04	2.0E-18	D14547.1	NT	O14577 BAC CLONE RG114A06 FROM 7Q31, COMPLETE SEQUENCE. ;
5585	15500		1.67	2.0E-18	BF347229.1	EST_HUMAN	Human DNA, SINE repetitive element
5814	15720	25834	3.53	2.0E-18	AW665853.1	EST_HUMAN	Human DNA, SINE repetitive element
7779	17629	27861	1.53	2.0E-18	AW151673.1	EST_HUMAN	602021164F1 NCI_CGAP_Bn07 Homo sapiens cDNA clone IMAGE:4156670 5'
7779	17629	27862	1.53	2.0E-18	AW151673.1	EST_HUMAN	h94g01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2979984 3' similar to contains MER19.12 MER19 repetitive element ;
8340	18217	28469	5.32	2.0E-18	AW470791.1	EST_HUMAN	MER19.12 MER19 repetitive element ;
8968	18774	29065	4.44	2.0E-18	AW151299.1	EST_HUMAN	xf67e10.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2623146 3' similar to contains MER10.12
9325	11049		3.15	2.0E-18	BE256097.1	EST_HUMAN	MER10 repetitive element ;
4318	14215		1.02	1.0E-18	T95406.1	EST_HUMAN	xf67e10.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2623146 3' similar to contains MER10.12
5286	15208	24985	2.38	1.0E-18	AV653405.1	EST_HUMAN	MER10 repetitive element ;
5419	15340	25394	1.97	1.0E-18	D00099.1	NT	ha33d08.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2875499 3' similar to contains THR.b3
5419	15340	25395	1.97	1.0E-18	D00099.1	NT	THR repetitive element ;
5883	15790	25912	1.32	1.0E-18	AL163280.2	NT	xg47e09.x1 NCI_CGAP_UH1 Homo sapiens cDNA clone IMAGE:2630728 3' similar to contains MER8.b2
							MER8 repetitive element ;
							MER8 repetitive element ;
							601114352F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3355044 5'
							ye43g05.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:120536 5' similar to contains L1 repetitive element ;
							AV653405 GLC Homo sapiens cDNA clone GLODKE11 3'
							Homo sapiens mRNA for Na,K-ATPase alpha-subunit, complete cds
							Homo sapiens mRNA for Na,K-ATPase alpha-subunit, complete cds
							Homo sapiens chromosome 21 segment HS21C080

Page 178 of 413
Table 4
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7696	17546	27769	4.4	1.0E-18	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RoRet gene, and sodium phosphate transporter (NPT3) gene, complete cds
9277	18980	26324	2.53	1.0E-18	AF003529.1	NT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
533	10475	20289	4.28	9.0E-19	AA281961.1	EST_HUMAN	z11d06.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712811 5' similar to contains MER19.i2
534	10475	20289	3.19	9.0E-19	AA281961.1	EST_HUMAN	MER19 repetitive element ;
6594	16454		5.21	9.0E-19	F08688.1	EST_HUMAN	z11d06.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712811 5' similar to contains MER19.i2
7042	16919	27110	2.46	9.0E-19	AL163203.2	NT	MER19 repetitive element ;
7042	16919	27111	2.46	9.0E-19	AL163203.2	NT	HSC23F051 normalized infant brain cDNA Homo sapiens cDNA clone c-23f05
8470	18343	28608	3.88	9.0E-19	AB032969.1	NT	Homo sapiens chromosome 21 segment HS21C003
							Homo sapiens chromosome 21 segment HS21C003
							Homo sapiens mRNA for KIAA1143 protein, partial cds
9042	10475	20289	8.69	9.0E-19	AA281961.1	EST_HUMAN	z11d06.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712811 5' similar to contains MER19.i2
1032	10950		1.54	8.0E-19	AW974902.1	EST_HUMAN	MER19 repetitive element ;
							EST387007 MAGE resequences, MAGN Homo sapiens cDNA
2198	12085	21987	1.58	7.0E-19	4758139	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 6 (RNA helicase, 54kD) (DDX6) mRNA
5884	15791	25913	2.15	7.0E-19	AF092090.1	NT	Rattus norvegicus cpl151 mRNA, partial cds
9179	19742		2.95	7.0E-19	AA706684.1	EST_HUMAN	z60b01.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:435145 3'
3713	13626		1.02	6.0E-19	AW852930.1	EST_HUMAN	PMO-CT0248-131099-001-g01 CT0248 Homo sapiens cDNA
4360	14266	24041	1.36	6.0E-19	P34986	SWISSPROT	OLFACTORY RECEPTOR 6 (M50)
4360	14266	24042	1.36	6.0E-19	P34986	SWISSPROT	OLFACTORY RECEPTOR 6 (M50)
4694	14580		1.16	6.0E-19	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
4952	14829	24595	1.09	6.0E-19	AL120817.1	EST_HUMAN	DKFZp762F192_r1 762 (synonym: hmel2) Homo sapiens cDNA clone DKFZp762F192 5'
5571	15486	25562	5.24	5.0E-19	Q00193	SWISSPROT	ZONA PELLUCIDA SPERM-BINDING PROTEIN B PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP-X) (RC55)
8824	18637	28921	7.19	5.0E-19	AW183725.1	EST_HUMAN	xg87b02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2664171 3' similar to contains element MSR1 repetitive element ;
							Human germline T-cell receptor beta chain TORBV13S1, TORBV6S8A2T, TORBV5S8A3N2T, TORBV13S6A2T, TORBV6S9P, TORBV5S3A2T, TORBV13S8P, TORBV6S3A1N1T, TORBV6S2, TORBV6S6A2T, TORBV6S7P, TORBV13S4, TORBV6S2A1N1T, TORBV5S4A2T, TORBV6S4A1, TORBV23S1A2T, TORBV12>
9849	19495		1.52	5.0E-19	U66060.1	NT	Homo sapiens mRNA, chromosome 1 specific transcript KIAA0501
542	10483	20293	1.45	4.0E-19	AB007970.1	NT	
2649	12516	22406	1.39	4.0E-19	BF697362.1	EST_HUMAN	602130910F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4287674 5'

Page 179 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3778	13690	23476	1.74	3.0E-19	Q28997	SWISSPROT	BETA-2 ADRENERGIC RECEPTOR
3778	13690	23476	1.74	3.0E-19	Q28997	SWISSPROT	BETA-2 ADRENERGIC RECEPTOR
4345	14242	24024	1.18	3.0E-19	AV708136.1	EST_HUMAN	AV708136 ADC Homo sapiens cDNA clone ADCAMA11 5'
6370	16232		2.47	3.0E-19	11432214	NT	Homo sapiens similar to aldo-keto reductase family 1, member B11 (aldose reductase-like) (H. sapiens) (LOC63222), mRNA
7443	16456	26645	1.23	3.0E-19	X89885.1	NT	M.musculus mRNA for TPCR33 protein
9416	19068		7.38	3.0E-19	AF165520.1	NT	Homo sapiens phorbol 1 protein (PBI) mRNA, complete cds
2513	12387	22279	17.57	2.0E-19	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
6849	16728	26923	8.96	2.0E-19	AA012854.1	EST_HUMAN	ze34cd09.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:360880 5'
473	10417		1.6	1.0E-19	BE408611.1	EST_HUMAN	601304125F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638310 5'
2118	12007	21906	1.4	1.0E-19	H30795.1	EST_HUMAN	yo79g07.r1 Soares adult brain N2b4HB55Y Homo sapiens cDNA clone IMAGE:184188 5' similar to contains MER10 repetitive element ;
2685	12550		2.88	1.0E-19	D38044.1	NT	Human gene for Ah-receptor, exon 7-9
2817	12746		5.03	1.0E-19	4758977	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
3355	13274	23075	1.27	1.0E-19	AA834967.1	EST_HUMAN	aj49b12.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1383631 3' similar to contains MER37.12
5701	15609	25711	2.37	1.0E-19	U12186.1	NT	MER37 repetitive element ;
6919	16797	26980	1.79	1.0E-19	M64657.1	NT	Oryctolagus cuniculus sodium/dicarboxylate cotransporter mRNA, partial cds
7076	16953		2.83	1.0E-19	T99920.1	EST_HUMAN	Rabbit phosphorylase kinase beta subunit mRNA, complete cds
7853	17703	27948	25.21	1.0E-19	AW812259.1	EST_HUMAN	ye72b02.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:123243 5' similar to contains OFR repetitive element ;
7857	17707	27953	1.79	1.0E-19	N44631.1	EST_HUMAN	RCO-ST0174-191099-031-b05 ST0174 Homo sapiens cDNA
6005	15910	26035	2.22	8.0E-20	7657286	NT	ye31e09.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:272872 5'
6005	15910	26036	2.22	8.0E-20	7657286	NT	Mus musculus keratin-associated protein 9-1 (Krtap9-1), mRNA
6439	16300	26462	1.31	8.0E-20	A1221371.1	EST_HUMAN	Mus musculus keratin-associated protein 9-1 (Krtap9-1), mRNA
6439	16300	26463	1.31	8.0E-20	A1221371.1	EST_HUMAN	gg86f09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1842089 3'
3238	13161	22961	0.88	7.0E-20	BF326455.1	EST_HUMAN	gg86f09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1842089 3'
6176	15133	24852	5.53	7.0E-20	AL138120.1	EST_HUMAN	PM4-AN0096-050900-003-a04 AN0096 Homo sapiens cDNA
6947	16825	27018	10.99	7.0E-20	AA557657.1	EST_HUMAN	DKFZp547D092.r1 547 (synonym: hfrb1) Homo sapiens cDNA clone DKFZp547D092 5'
6947	16825	27019	10.99	7.0E-20	AA557657.1	EST_HUMAN	n46c04.s1 NCL_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER29.b2
8952	18759		10.45	7.0E-20	6912633	NT	MER29 repetitive element ;
3508	13424	23227	3.85	6.0E-20	P39188	SWISSPROT	n46c04.s1 NCL_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER29.b2
							MER29 repetitive element ;
							Homo sapiens ribosomal protein L13a (RPL13A), mRNA
							ALLU SUBFAMILY J SEQUENCE CONTAMINATION WARNING ENTRY

Page 180 of 413

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4175	14075	23850	2.55	6.0E-20	BE622434.1	EST_HUMAN	601441231F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3916231 5'
4491	14385		1.17	5.0E-20	AV725123.1	EST_HUMAN	AV725123 HTC Homo sapiens cDNA clone HT03TA01 5'
6634	16514	26704	4.66	5.0E-20	W90525.1	EST_HUMAN	zh78d08.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:418191 3' similar to contains MER30.t1 MER30 repetitive element ;
6634	16514	26705	4.66	5.0E-20	W90525.1	EST_HUMAN	zh78d08.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:418191 3' similar to contains MER30.t1 MER30 repetitive element ;
7128	17005	27197	1.44	5.0E-20	AB028174.1	NT	Mus musculus MMAN-g mRNA, complete cds
7128	17005	27198	1.44	5.0E-20	AB028174.1	NT	Mus musculus MMAN-g mRNA, complete cds
6624	16504		6.03	4.0E-20	AI874352.1	EST_HUMAN	tz64g03.x1 NCI_CGAP_Ov35 Homo sapiens cDNA clone IMAGE:2293396 3'
7995	17845	28087	1.17	4.0E-20	AW937469.1	EST_HUMAN	QV3-DT0043-090200-080-c04 DT0043 Homo sapiens cDNA
2092	11981	21876	1.04	3.0E-20	U03888.1	NT	Human BXP21 gene
4115	14015	23795	1.69	3.0E-20	P23273	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN 114
4524	14417	24201	0.86	3.0E-20	AA037616.1	EST_HUMAN	zk36b12.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:484895 3' similar to contains L1.t3 L1 repetitive element ;
7172	17049		3.26	3.0E-20	D14547.1	NT	Human DNA, SINE repetitive element
8055	17946		2.08	3.0E-20	P11369	SWISSPROT	RETROVIRUS-RELATED POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ;
9195	18929	25352	5.37	3.0E-20	BE888422.1	EST_HUMAN	ENDONUCLEASE]
813	10741		4.52	2.0E-20	AW303888.1	EST_HUMAN	601514180F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3915522 5'
1095	11011		2.03	2.0E-20	AA516335.1	EST_HUMAN	xr24e10.x1 NCI_CGAP_U4 Homo sapiens cDNA clone IMAGE:2761098 3' similar to SW:RS5_MOUSE
1095	11011		2.03	2.0E-20	AA516335.1	EST_HUMAN	P97461 40S RIBOSOMAL PROTEIN S5 ;
1095	11011	20852	2.03	2.0E-20	AA516335.1	EST_HUMAN	ng69h09.s1 NCI_CGAP_Lip2 Homo sapiens cDNA clone IMAGE:940097 similar to TR:G1224066
1095	11011	20853	2.03	2.0E-20	AA516335.1	EST_HUMAN	G1224066 ORF2: FUNCTION UNKNOWN. ;
2786	10741		2.72	2.0E-20	AW303888.1	EST_HUMAN	ng69h09.s1 NCI_CGAP_Lip2 Homo sapiens cDNA clone IMAGE:940097 similar to TR:G1224066
4866	14746	24525	4.32	2.0E-20	Q28983	SWISSPROT	G1224066 ORF2: FUNCTION UNKNOWN. ;
4866	14746	24526	4.32	2.0E-20	Q28983	SWISSPROT	ng69h09.s1 NCI_CGAP_Lip2 Homo sapiens cDNA clone IMAGE:940097 similar to TR:G1224066
5090	14960		11.35	2.0E-20	5174538	NT	G1224066 ORF2: FUNCTION UNKNOWN. ;
7301	17177	27378	2.95	2.0E-20	D10083.1	NT	ng69h09.s1 NCI_CGAP_Lip2 Homo sapiens cDNA clone IMAGE:940097 similar to TR:G1224066
7301	17177	27379	2.95	2.0E-20	D10083.1	NT	xr24e10.x1 NCI_CGAP_U4 Homo sapiens cDNA clone IMAGE:2761098 3' similar to SW:RS5_MOUSE
8993	18797	28089	1.95	2.0E-20	AA766755.1	EST_HUMAN	P97461 40S RIBOSOMAL PROTEIN S5 ;
							ZONADHESIN PRECURSOR
							ZONADHESIN PRECURSOR
							Homo sapiens malate dehydrogenase 1, NAD (soluble) (MDH1) mRNA
							Homo sapiens RGH1 gene, retrovirus-like element
							Homo sapiens RGH1 gene, retrovirus-like element
							oa35b08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1306935 3' similar to contains MER4.b2
							MER4 repetitive element ;

Page 181 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8993	18797	29090	1.95	2.0E-20	AA766755.1	EST_HUMAN	ca35b08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1306935 3' similar to contains MER4.b2
9574	19482	25129	1.5	2.0E-20	H55371.1	EST_HUMAN	MER4 repetitive element;
1967	12648	21751	5.25	1.0E-20	AA281961.1	EST_HUMAN	CHR220310 Chromosome 22 exon Homo sapiens cDNA clone C22_391 5'
4338	14235	24018	1	1.0E-20	BF115158.1	EST_HUMAN	z11d06.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712811 5' similar to contains MER19.t2
7285	17161	27359	2.42	1.0E-20	11418491	NT	MER19 repetitive element;
8839	18652	28940	2.81	1.0E-20	AF223391.1	NT	hr84b06.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3135155 3' similar to contains L1.12 L1
9321	19011		1.84	1.0E-20	AA420453.1	EST_HUMAN	repetitive element;
2883	12810		1.08	9.0E-21	AJ003514.1	EST_HUMAN	Homo sapiens Autosomal Highly Conserved Protein (AHCP), mRNA
9045	18830		2.35	9.0E-21	AW898189.1	EST_HUMAN	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
7115	16992		1.74	8.0E-21	AW674891.1	EST_HUMAN	nc60g08.r1 NCI_CGAP_Prl Homo sapiens cDNA clone IMAGE:745694 similar to contains L1.t3 L1
8825	18638	28922	3.42	8.0E-21	AA809411.1	EST_HUMAN	repetitive element;
9207	18938		4.02	8.0E-21	O21330	SWISSPROT	AJ003514 Selected chromosome 21 cDNA library Homo sapiens cDNA clone MPI12-8.U21
2023	11914	21803	2.07	7.0E-21	P15800	SWISSPROT	RC3-NN0068-090500-021-b03 NN0068 Homo sapiens cDNA
2023	11914	21804	2.07	7.0E-21	P15800	SWISSPROT	bb30a02.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2984714 5' similar to SW:NIAM_HUMAN
4161	14051		4.96	7.0E-21	AA046502.1	EST_HUMAN	O95169 NADH-UBIQUINONE OXIDOREDUCTASE ASH1 SUBUNIT PRECURSOR;
6887	16766	26862	1.43	7.0E-21	AJ277557.1	NT	ob71f06.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1336835 3'
7036	16913	27102	6.84	7.0E-21	D14718.1	NT	ATP SYNTHASE A CHAIN (PROTEIN 6)
8080	17971	28220	2.94	7.0E-21	AA723404.1	EST_HUMAN	LAMININ BETA-2 CHAIN PRECURSOR (S-LAMININ) (LAMININ CHAIN B3)
8590	18458	28727	2.37	7.0E-21	7706668	NT	LAMININ BETA-2 CHAIN PRECURSOR (S-LAMININ) (LAMININ CHAIN B3)
4014	13920	23696	0.94	6.0E-21	BE408611.1	EST_HUMAN	LAMININ BETA-2 CHAIN PRECURSOR (S-LAMININ) (LAMININ CHAIN B3)
907	10831	20678	1.6	5.0E-21	5902031	NT	z1k67a06.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:487858 5'
2284	12119	22021	1.08	5.0E-21	AA928194.1	EST_HUMAN	Homo sapiens dNT-2 gene for mitochondrial 5(3')-deoxyribonucleotidase (dNT-2 gene), exons 1-5
4266	14165	23942	2.65	5.0E-21	BE968839.1	EST_HUMAN	Human chromosomal protein HMG1 related gene
4696	14582	24375	5.98	5.0E-21	4885474	NT	zg73d03.s1 Soares_fetal_heart_NbH19W Homo sapiens cDNA clone IMAGE:398981 3' similar to gb:M14338 VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN); contains THR.t3 OFR
							repetitive element;
							Homo sapiens PTD013 protein (PTD013), mRNA
							Homo sapiens PTD013 protein (PTD013), mRNA
							601304125f1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3688310 5'
							601304125f1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3688310 5'
							Homo sapiens protein tyrosine phosphatase, non-receptor type 21 (PTPN21), mRNA
							om23q03.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1641908 3' similar to TR:O02711
							O02711 PRO-POL-DUTPASE POLYPROTEIN;
							601649871f1 NIH_MGC_74 Homo sapiens cDNA clone IMAGE:3933880 5'
							Homo sapiens melanoma antigen, family C, 1 (MAGEC1), mRNA

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5109	14977		0.95	5.0E-21	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
1701	11602	21473	1.24	4.0E-21	AA970713.1	EST_HUMAN	0086e08.s1 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1573094 3' similar to TR:Q16630 Q16530
6106	16000	26138	3.06	4.0E-21	AB019576.1	NT	PMS3 MRNA ;contains OFR.11 OFR repetitive element ;
2228	12113	22015	1.06	3.0E-21	AL163201.2	NT	Rattus norvegicus mRNA for rTIM, complete cds
3041	12968	22762	4.04	3.0E-21	AJ007973.1	NT	Homo sapiens chromosome 21 segment HS21C001
5749	15657		1.72	3.0E-21	BF184739.1	EST_HUMAN	Homo sapiens LGMD2B gene
6206	15966	26100	4.79	3.0E-21	BF361093.1	EST_HUMAN	601844465F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4064945 5'
7589	17440	27656	1.55	3.0E-21	AW897760.1	EST_HUMAN	RC1-OT0083-100800-019-g08 OT0083 Homo sapiens cDNA
9684	19672	24992	1.32	3.0E-21	AL163213.2	NT	CM1-NN0063-280400-203-h08 NN0063 Homo sapiens cDNA
140	10114		14.75	2.0E-21	BE163247.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C013
919	10843	20688	0.85	2.0E-21	AB007857.2	NT	QV3-HT0458-170200-090-g12 HT0458 Homo sapiens cDNA
919	10843	20689	0.85	2.0E-21	AB007857.2	NT	Homo sapiens mRNA for KIAA0397 protein, partial cds
1196	11106		2.09	2.0E-21	BE064410.1	EST_HUMAN	Homo sapiens mRNA for KIAA0397 protein, partial cds
2599	12468	22361	2.89	2.0E-21	Q28983	SWISSPROT	RC4-BT0311-141199-011-h06 BT0311 Homo sapiens cDNA
2599	12468	22362	2.89	2.0E-21	Q28983	SWISSPROT	ZONADHESIN PRECURSOR
5370	15290	25126	1.77	2.0E-21	AI624582.1	EST_HUMAN	ts30303.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2230109 3' similar to TR:Q99854 Q99854
6870	16749	26944	4.66	2.0E-21	BE141785.1	EST_HUMAN	HYPOTHETICAL 51.1 KD PROTEIN ;
7122	16999	27190	3.43	2.0E-21	AU136779.1	EST_HUMAN	QV0-HT0703-091199-050-g11 HT0703 Homo sapiens cDNA
8412	18287		1.98	2.0E-21	BE350127.1	EST_HUMAN	AU136779 PLACE1 Homo sapiens cDNA clone PLACE1005052 5'
8636	18501	28776	1.92	2.0E-21	BE973829.1	EST_HUMAN	h09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3
8636	18501	28777	1.92	2.0E-21	BE973829.1	EST_HUMAN	MER29 repetitive element ;
9425	19072		5.13	2.0E-21	AF176815.1	NT	G01680636F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3951008 5'
1235	11142	20994	1.68	1.0E-21	AA557657.1	EST_HUMAN	G01680636F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3951008 5'
1381	11286		2.46	1.0E-21	AI601264.1	EST_HUMAN	Homo sapiens putative 8-hydroxyguanine DNA glycosylase gene, complete cds
5907	15813		2.43	1.0E-21	AL079752.1	EST_HUMAN	h146c04.s1 NCI_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER29.b2
6269	16134	26289	4.43	1.0E-21	AI223104.1	EST_HUMAN	MER29 repetitive element ;
8021	17871		1.46	1.0E-21	5730038	NT	ai-88d12.x1 Barstead colon HPLR87 Homo sapiens cDNA clone IMAGE:2152343 3'
4312	14209	23993	2.55	9.0E-22	AI702438.1	EST_HUMAN	DKFZp4340830_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp4340830 5'
							qg47e05.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1838336 3' similar to gb:M64241 QM
							PROTEIN (HUMAN);
							Homo sapiens SET1 domain and mariner transposase fusion gene (SETMAR) mRNA
							tz94a03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2296204 3' similar to TR:Q15408 Q15408
							NEUTRAL PROTEASE LARGE SUBUNIT ;

Page 183 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7002	16879	27070	1.26	9.0E-22	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
7002	16879	27071	1.26	9.0E-22	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
8171	18059	28309	3.65	9.0E-22	AV761874.1	EST_HUMAN	AV761874 MDS Homo sapiens cDNA clone MDSO0305 5'
8945	18753	29048	2.92	9.0E-22	AU140358.1	EST_HUMAN	AU140358 PLACE2 Homo sapiens cDNA clone PLACE2000394 5'
8997	18800		2.39	9.0E-22	9790256	NT	Mus musculus TF-1 cell apoptosis related protein-15 (Tfar15), mRNA
933	10858		4.55	8.0E-22	BE144748.1	EST_HUMAN	CM0-HT0179-281099-076-h05 HT0179 Homo sapiens cDNA
6609	16489		3.8	8.0E-22	AA046502.1	EST_HUMAN	zkl67a06.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:487858 5'
649	10585	20401	4.23	7.0E-22	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
4186	14086	23861	2.32	7.0E-22	Q61838	SWISSPROT	ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA2M)
4969	14844	24613	1.18	7.0E-22	AB008881.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
7044	18921		1.34	7.0E-22	AF151054.1	NT	Homo sapiens HSPC220 mRNA, complete cds
7127	17004	27196	2.63	7.0E-22	M78590.1	EST_HUMAN	EST00738 Fetal brain, Stratagene (cat#936206) Homo sapiens cDNA clone HFBCF07
7538	17389	27599	1.86	7.0E-22	AF009660.1	NT	Homo sapiens T cell receptor beta locus, TCRBV7S3A2 to TCRBV12S2 region
6796	16675		1.82	6.0E-22	AW029123.1	EST_HUMAN	wx05g07.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2542812 3'
5927	18832	25955	2.53	5.0E-22	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
7912	17762	28001	3.97	5.0E-22	U60822.1	NT	Human dystrophin (DMD) gene, exons 7, 8 and 9, and partial cds
9645	19213		2.03	5.0E-22	BF476511.1	EST_HUMAN	naa27b06.x1 NCI_CGAP_Py28 Homo sapiens cDNA clone IMAGE:3255898 3' similar to contains Alu repetitive element;
3584	13498		0.85	4.0E-22	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
6902	19767		2.7	4.0E-22	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
8105	17995	28244	2.97	4.0E-22	BF218030.1	EST_HUMAN	601882813F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4095434 5'
9803	19315		1.51	4.0E-22	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
943	10868		1.2	3.0E-22	AI469679.1	EST_HUMAN	tm14h10.x1 NCI_CGAP_Cot14 Homo sapiens cDNA clone IMAGE:2156611 3' similar to gb:119593 HIGH AFFINITY INTERLEUKIN-3 RECEPTOR B (HUMAN); contains L1.t1 L1 repetitive element;
2523	12397	22288	1.86	3.0E-22	AI859038.1	EST_HUMAN	w168b04.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2429839 3' similar to SW:RL21_HUMAN
3620	13534		1.49	3.0E-22	D14718.1	NT	P46778 60S RIBOSOMAL PROTEIN L21.;
4695	14581	24374	2.72	3.0E-22	AI090125.1	EST_HUMAN	Human chromosomal protein HMG1 related gene
6793	16672	26864	2.75	3.0E-22	BE089841.1	EST_HUMAN	qb28c07.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1697580 3' similar to contains MER12.12 MER12 repetitive element;
1910	11805		2.86	2.0E-22	N24942.1	EST_HUMAN	RC5-BT0707-150300-021-H10 BT0707 Homo sapiens cDNA
2476	12352	22244	1.33	2.0E-22	P24916	SWISSPROT	yx73405.s1 Soares_melanocyte_2NBHM Homo sapiens cDNA clone IMAGE:267369 3'
3373	13292	23091	4.06	2.0E-22	8394043	NT	IMMEDIATE EARLY GENE 13 PROTEIN PRECURSOR
4133	14033	23808	1.26	2.0E-22	AW817794.1	EST_HUMAN	Homo sapiens protein kinase, AMP-activated, gamma 3 non-catalytic subunit (PRKAG3), mRNA

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5570	19447	25561	1.44	2.0E-22	W39455.1	EST_HUMAN	zc20f01.r1 Soares_senescent_fibroblasts_NbHSF Homo sapiens cDNA clone IMAGE:322873 5' similar to
5747	15655	25763	3.39	2.0E-22	BF092116.1	EST_HUMAN	gb.X72308 MONOCYTE CHEMOTACTIC PROTEIN 3 PRECURSOR (HUMAN);
7595	17446	27661	1.49	2.0E-22	A1276522.1	EST_HUMAN	RC0-TN0079-150900-025-h12 TN0079 Homo sapiens cDNA
7640	17490	27710	7.07	2.0E-22	AA715315.1	EST_HUMAN	q176h06.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:1878299 3' similar to contains
7640	17490	27711	7.07	2.0E-22	AA715315.1	EST_HUMAN	MER29.i3 MER29 repetitive element ;
8974	18779	29071	2.04	2.0E-22	AW418960.1	EST_HUMAN	nv04h11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA clone IMAGE:1219269 3'
9009	19304	25200	1.85	2.0E-22	AL163280.2	NT	nv04h11.s1 NCI_CGAP_Pr22 Homo sapiens cDNA clone IMAGE:1219269 3'
1836	11793	21609	1.78	1.0E-22	AW865517.1	EST_HUMAN	ha24f04.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2874655 3'
2539	12413	22303	2.65	1.0E-22	U50871.1	NT	Homo sapiens chromosome 21 segment HS21C080
3365	13284	23084	1.74	1.0E-22	D14547.1	NT	PM4-SN0020-010400-009-h02 SN0020 Homo sapiens cDNA
6553	16411	26599	1.49	1.0E-22	BE084667.1	EST_HUMAN	Human familial Alzheimer's disease (STM2) gene, complete cds
9844	19342	23236	0.84	8.0E-23	AF198349.1	NT	Human DNA, SINE repetitive element
3523	13439	24935	1.48	8.0E-23	AH33716.1	EST_HUMAN	MR0-BT0659-220200-002-h07 BT0659 Homo sapiens cDNA
5241	15165	24936	1.48	8.0E-23	AH33716.1	EST_HUMAN	IL2-UM0076-070400-061-F11 UM0076 Homo sapiens cDNA
3271	13192	24438	1.04	7.0E-23	10092626	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
4764	14649	24438	1.04	7.0E-23	10092626	NT	HA2340 Human fetal liver cDNA library Homo sapiens cDNA
8398	18274	25526	3.51	7.0E-23	5031952	NT	HA2340 Human fetal liver cDNA library Homo sapiens cDNA
3387	13305	23846	3.12	6.0E-23	AF199333.1	NT	AV647246 GLC Homo sapiens cDNA clone GLCAWC07 3'
4171	14071	23846	3.12	6.0E-23	AF199333.1	NT	Homo sapiens DKFZP564O0463 protein (DKFZP564O0463), mRNA
9146	18999	25339	1.99	6.0E-23	AF224669.1	NT	Homo sapiens Nof56 (D. melanogaster)-like protein (NOT56L) mRNA
9146	18999	25339	1.99	6.0E-23	AF224669.1	NT	Rattus norvegicus RIM1B (Rim1B) mRNA, complete cds
9341	19021	25297	2.18	6.0E-23	A1209130.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C049
5341	15262	25088	3.51	5.0E-23	U82671.2	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3
5781	19454	25797	3.51	5.0E-23	AF179818.1	NT	(UBE2D3) genes, complete cds
6397	19454	25797	3.04	5.0E-23	AF179818.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3
							(UBE2D3) genes, complete cds
							qg59c03.x1 Soares testis NIH Homo sapiens cDNA clone IMAGE:1839460 3' similar to
							SW:WV10_MOUSE P23249 PROTEIN MOV-10. ;
							Homo sapiens chromosome Xq28 melanoma antigen family A2a (MAGEA2A), melanoma antigen family A12
							(MAGEA12), melanoma antigen family A2b (MAGEA2B), melanoma antigen family A3 (MAGEA3), calretinin
							(CAL-T), NAD(P)H dehydrogenase-like protein (NSDHL), and LI>
							Pongo pygmaeus olfactory receptor (PPY116) gene, partial cds
							Pongo pygmaeus olfactory receptor (PPY116) gene, partial cds

Page 185 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6580	16460	26653	3.56	3.0E-23	AA130165.1	EST_HUMAN	z3509.r1 Soares_pregnant_uterus_NbhPU Homo sapiens cDNA clone IMAGE:503968 5' similar to
7329	17233	27435	3.61	3.0E-23	Z70664.1	NT	contains MER29.12 MER29 repetitive element ;
7329	17233	27436	3.61	3.0E-23	Z70664.1	NT	Human endogenous retroviral element HC2
650	10586	20402	4.36	2.0E-23	AJ289880.1	NT	Human endogenous retroviral element HC2
1126	12644		2.77	2.0E-23	M55270.1	NT	Homo sapiens KIAA0851 gene (partial), X73 gene and LZTFL1 gene
2765	12627	22519	1.06	2.0E-23	P22105	SWISSPROT	Human matrix Gla protein (MGP) gene, complete cds
2765	12627	22520	1.06	2.0E-23	P22105	SWISSPROT	TENASCIN-X PRECURSOR (TN-X) (HEXABRACHION-LIKE)
3325	13245		1.46	2.0E-23	AJ201458.1	EST_HUMAN	TENASCIN-X PRECURSOR (TN-X) (HEXABRACHION-LIKE)
3655	13569		3.03	2.0E-23	BE165980.1	EST_HUMAN	qs7311.x1 NCL CGAP_Pr28 Homo sapiens cDNA clone IMAGE:1943757 3' similar to TR:Q13537 Q13537
3894	13804	23589	2.98	2.0E-23	H59931.1	EST_HUMAN	MER37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE. ;
3894	13804	23590	2.98	2.0E-23	H59931.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
							yr16a02.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205418 5'
							yr16a02.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205418 5'
6595	16475		5.62	2.0E-23	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450
9131	18888		2.69	2.0E-23	M32658.1	NT	polypeptide 5 (CYP3A5) gene, partial cds
9656	19218		2.47	2.0E-23	AF009660.1	NT	Human alcohol dehydrogenase gamma subunit (ADH3) gene, exon 1
9774	19676		2.02	2.0E-23	AU133931.1	EST_HUMAN	Homo sapiens T cell receptor beta locus, TCRBV7S3A2 to TCRBV12S2 region
4428	14323	24110	1.6	1.0E-23	AL163252.2	NT	AU133831 OVARC1 Homo sapiens cDNA clone OVARC1000946 5'
4657	14543		4.49	1.0E-23	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
6034	15937		2.91	1.0E-23	BE378471.1	EST_HUMAN	601236455F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3608653 5'
6865	16744	26937	4.54	1.0E-23	AA448097.1	EST_HUMAN	zw82c06.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:782698 5' similar to contains PTR5.12
540	10481		1.88	9.0E-24	AA663213.1	EST_HUMAN	PTR5 repetitive element ;
4549	14442	24225	1.08	8.0E-24	P23269	SWISSPROT	ab75a08.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:852768 3' similar to
4549	14442	24226	1.08	8.0E-24	P23269	SWISSPROT	TR:E19822 E19822 CA PROTEIN. ;
3796	13708		1.31	7.0E-24	AW937954.1	EST_HUMAN	OLFACTORY RECEPTOR-LIKE PROTEIN I3
690	10623		2.4	6.0E-24	AB001421.1	NT	OLFACTORY RECEPTOR-LIKE PROTEIN I3
820	10748	20595	10.14	6.0E-24	AL163249.2	NT	QV0-DT0047-170200-122-a06 DT0047 Homo sapiens cDNA
3889	13800	23585	7.18	5.0E-24	AJ229043.1	NT	Macaca fascicularis mRNA for Testis-Specific Protein Y (TSPY), complete cds
5611	15526	25609	3.06	4.0E-24	AA594178.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C049
							Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
							hn31h05.s1 NCL CGAP_Gas1 Homo sapiens cDNA clone IMAGE:1085529 3' similar to SW:POL_MLVRK
							P31795 POL POLYPROTEIN ;

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9506	19121	25293	2.12	4.0E-24	AB029016.1	NT	Homo sapiens mRNA for KIAA1093 protein, partial cds
9748	19309	25203	1.53	4.0E-24	11418318	NT	Homo sapiens G-2 and S-phase expressed 1 (GTSE1), mRNA
6906	16784		3.02	3.0E-24	AW614871.1	EST_HUMAN	hh8c08.x1 NCL_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2967950 3' similar to contains MER29.b2
7449	17258	27463	4.12	3.0E-24	AL163252.2	NT	MER29 repetitive element;
9587	19171	25273	5.14	3.0E-24	BF127762.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C052
2298	12180	22078	2.33	2.0E-24	AA167539.1	EST_HUMAN	601810449F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4053396 5'
3729	13841		1.01	2.0E-24	AW898189.1	EST_HUMAN	zp11f09.r1 Stratiogene fetal retina 937202 Homo sapiens cDNA clone IMAGE:603161 5'
7075	16952	27146	3.14	2.0E-24	AL119159.1	EST_HUMAN	RC3-NN0068-090500-021-b03 NN0068 Homo sapiens cDNA
9433	19717		6.55	2.0E-24	M28877.1	NT	DKFZp761L1712_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761L1712 5'
1670	11572	21438	2.18	1.0E-24	7708340	NT	Human O family dispersed repeat element
2638	12505		1.87	1.0E-24	AW820194.1	EST_HUMAN	Homo sapiens CGI-127 protein (LOC51646), mRNA
2987	12915	22710	0.91	1.0E-24	D66423.1	NT	QV0-S10294-100400-185-c10 ST0294 Homo sapiens cDNA
4173	14073		1.63	1.0E-24	AF143313.1	NT	Mus musculus mRNA for HGT keratin, partial cds
6455	16317	26484	4.07	1.0E-24	AL163303.2	NT	Homo sapiens PTEN (PTEN) gene, exon 2
6633	16513	26703	1.98	1.0E-24	AW901164.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C103
4926	14805	24575	2.32	7.0E-25	AA483944.1	EST_HUMAN	CMO-NN1010-130300-281-d07 NN1010 Homo sapiens cDNA
6785	16664	26955	3.75	7.0E-25	AA468646.1	EST_HUMAN	ne92e10.s1 NCL_CGAP_Kid1 Homo sapiens cDNA clone IMAGE:911754 similar to contains MER1.b2
8942	18750	29045	7.46	7.0E-25	AA583540.1	EST_HUMAN	MER1 repetitive element;
6174	15131		4.32	6.0E-25	W87623.1	EST_HUMAN	ne06a09.s1 NCL_CGAP_Co3 Homo sapiens cDNA clone IMAGE:880408 3' similar to contains THR.b2 THR
6543	16401	26580	11.44	6.0E-25	7305360	NT	repetitive element;
5166	15032	24799	0.95	5.0E-25	AW838171.1	EST_HUMAN	nf25h06.s1 NCL_CGAP_P1 Homo sapiens cDNA clone IMAGE:914843 similar to SW:R14A_YEAST
8634	18499	28774	3.61	5.0E-25	AW979107.1	EST_HUMAN	P36105 PROBABLE 60S RIBOSOMAL PROTEIN L14EA. ;
1430	11335	21201	2.08	4.0E-25	T98107.1	EST_HUMAN	zh65h07.r1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:416989 5'
3356	13275		2.78	4.0E-25	AW887671.1	EST_HUMAN	Mus musculus clogelin (Olog), mRNA
4221	14119		3.02	4.0E-25	BE170957.1	EST_HUMAN	QV2-L10051-260300-111-f03 LT0051 Homo sapiens cDNA
3278	13199	22989	2.66	3.0E-25	8923321	NT	EST391217 IMAGE resequences, MAGP Homo sapiens cDNA
3278	13199	23000	2.66	3.0E-25	8923321	NT	EST391217 IMAGE resequences, MAGP Homo sapiens cDNA
4798	14683	24470	0.85	3.0E-25	P29622	SWISSPROT	ye56f04.r1 Soares_fetal_liver_spleen_1NFLS Homo sapiens cDNA clone IMAGE:121783 5'
6854	16733	26926	2.47	3.0E-25	AL163210.2	NT	PM3-OT0093-280200-001-g07 OT0093 Homo sapiens cDNA
							QV3-HT0543-140400-149-e11 HT0543 Homo sapiens cDNA
							Homo sapiens hypothetical protein FLJ20344 (FLJ20344), mRNA
							Homo sapiens hypothetical protein FLJ20344 (FLJ20344), mRNA
							KALLISTATIN PRECURSOR (KALLIKREIN INHIBITOR) (PROTEASE INHIBITOR 4)
							Homo sapiens chromosome 21 segment HS21C010

Page 187 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8394	18270	28522	2.03	3.0E-25	AA579013.1	EST_HUMAN	nt30h10.s1 NCI_CGAP_Prl Homo sapiens cDNA clone IMAGE:915331 similar to contains L1.t1 L1
1325	11232	21088	3.37	2.0E-25	5032158	NT	repetitive element;
2280	12144	22043	7.11	2.0E-25	BE88016.1	EST_HUMAN	Homo sapiens transducin (beta)-like 1 (TBL1) mRNA
2801	12370	22263	4.32	2.0E-25	P17008	SWISSPROT	60151530F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913087 5'
4096	13996	23773	1.91	2.0E-25	P17008	SWISSPROT	40S RIBOSOMAL PROTEIN S16
4096	13996	23774	1.91	2.0E-25	P17008	SWISSPROT	40S RIBOSOMAL PROTEIN S16
7629	17480	27700	2.25	2.0E-25	AL449573.1	EST_HUMAN	40S RIBOSOMAL PROTEIN S16
361	10317	20138	1.61	1.0E-25	AL040229.1	EST_HUMAN	AL449573 Homo sapiens Testis (Stavrides GS) Homo sapiens cDNA
1228	11136		1.21	1.0E-25	9635487	NT	DKFZp434H0313_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434H0313 5'
2384	12264	22156	2.79	1.0E-25	Q06055	SWISSPROT	Human endogenous retrovirus, complete genome
4753	14638	24425	2.71	1.0E-25	BE162737.1	EST_HUMAN	ATP SYNTHASE LIPID-BINDING PROTEIN P2 PRECURSOR (ATPASE PROTEIN 9) (SUBUNIT C)
6069	19460	26199	2.85	1.0E-25	AA582590.1	EST_HUMAN	PM1-H10454-080100-002-h09 HT0454 Homo sapiens cDNA
6616	16496	26683	3.15	1.0E-25	AA709079.1	EST_HUMAN	nm54h11.s1 NCI_CGAP_Kid6 Homo sapiens cDNA clone IMAGE:1087749 3'
8337	18214	28467	3.5	1.0E-25	U93163.1	NT	zf9g04.s1 Soares_fetal_heart_Nb1H19W Homo sapiens cDNA clone IMAGE:384822 3' similar to contains PTR5.t3 PTR5 repetitive element;
9143	18897	28796	1.45	1.0E-25	D14547.1	NT	Homo sapiens IMAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds
9143	18897	28797	1.45	1.0E-25	D14547.1	NT	Human DNA, SINE repetitive element
9914	19389		1.32	1.0E-25	X51755.1	NT	Human DNA, SINE repetitive element
2433	12310	22206	1.94	9.0E-26	AL163218.2	NT	Human lambda-immunoglobulin constant region complex (germline)
9010	19501		1.73	9.0E-26	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C018
5492	15411		1.56	8.0E-26	D14547.1	NT	Homo sapiens chromosome 21 segment HS21C085
1559	11464	21321	1.44	7.0E-26	AF003528.1	NT	Human DNA, SINE repetitive element
3898	13808	23694	1.35	7.0E-26	X89211.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
4067	13969	23745	2.03	7.0E-26	AW340153.1	EST_HUMAN	H.sapiens DNA for endogenous retroviral like element
8923	18731		7.99	7.0E-26	AA115895.1	EST_HUMAN	hd02e12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2908366 3'
9700	19250		1.33	7.0E-26	AW954559.1	EST_HUMAN	zn30d08.r1 Stratagene neuroepithelium NT2RAMI 937234 Homo sapiens cDNA clone IMAGE:548943 5' similar to gb:M14338 VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN);
2178	12065	21967	2.44	6.0E-26	AF029308.1	NT	EST366629 MAGE resequences, MAGC Homo sapiens cDNA
3302	13223	23025	1.42	6.0E-26	AA206131.1	EST_HUMAN	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and tyrosinogen gene families
8932	18740	29033	4.98	6.0E-26	AL163210.2	NT	zq52h04.r1 Stratagene neuroepithelium (#937231) Homo sapiens cDNA clone IMAGE:645271 5'

Page 188 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1160	11073	20918	3.33	5.0E-26	AI708235.1	EST_HUMAN	as38h08.x1 Barstead aorta HPLRB6 Homo sapiens cDNA clone IMAGE:2319519 3' similar to WP:F49C12.11 CE03371;
1160	11073	20919	3.33	5.0E-26	AI708235.1	EST_HUMAN	as38h08.x1 Barstead aorta HPLRB6 Homo sapiens cDNA clone IMAGE:2319519 3' similar to WP:F49C12.11 CE03371;
9976	19435		1.71	5.0E-26	AI761429.1	EST_HUMAN	wg65e06.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2369986 3' similar to contains Alu repetitive element;
1525	11430		1.52	4.0E-26	AA329548.1	EST_HUMAN	EST33446 Embryo, 12 week II Homo sapiens cDNA 5' end
7416	17283		3.77	4.0E-26	7657670	NT	Homo sapiens upstream binding transcription factor, RNA polymerase I (UBTF), mRNA
8053	17944	28194	3.74	4.0E-26	BE266187.1	EST_HUMAN	601191345F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3535210 5'
1958	11853	21740	1.5	3.0E-26	AL045855.2	EST_HUMAN	DKFZp434I068_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434I066 5'
1987	11890		2.41	3.0E-26	AA115895.1	EST_HUMAN	zn30d08.r1 Stratagene neuroepithelium NT2RAMJ 937234 Homo sapiens cDNA clone IMAGE:548943 5' similar to gb:M14338 VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN);
3712	13625	23408	1.19	3.0E-26	AA152464.1	EST_HUMAN	zo30F10.r1 Stratagene colon (#937204) Homo sapiens cDNA clone IMAGE:588427 5' similar to TR:G695374 G695374 THYROID RECEPTOR INTERACTOR;
3712	13625	23409	1.19	3.0E-26	AA152464.1	EST_HUMAN	zo30F10.r1 Stratagene colon (#937204) Homo sapiens cDNA clone IMAGE:588427 5' similar to TR:G695374 G695374 THYROID RECEPTOR INTERACTOR;
6131	15978	26114	4.35	3.0E-26	BF245458.1	EST_HUMAN	601864963F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4083278 5'
8108	17998		2.18	3.0E-26	AF039405.1	NT	Homo sapiens MLL (MLL) gene, exons 1-3, and partial cds
8853	18685	28951	1.99	3.0E-26	AW875851.1	EST_HUMAN	QV2-PT0012-040400-124-e05 PT0012 Homo sapiens cDNA
8853	18685	28952	1.99	3.0E-26	AW875851.1	EST_HUMAN	QV2-PT0012-040400-124-e05 PT0012 Homo sapiens cDNA
8879	18691	28984	10.55	3.0E-26	AA583173.1	EST_HUMAN	nn37d05.s1 NCI_CGAP_GC5 Homo sapiens cDNA clone IMAGE:1086057 3' similar to contains OFR.t1 OFR repetitive element;
666	10600	20418	5.61	2.0E-26	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
1825	11722		3.36	2.0E-26	AL039099.2	EST_HUMAN	DKFZp568L171_s1 586 (synonym: htkd2) Homo sapiens cDNA clone DKFZp568L171 3'
3193	13118	22924	4.26	2.0E-26	X86894.1	NT	Musculus mRNA for astrocytic phosphoprotein, PEA-15
8135	18023		2.88	2.0E-26	D97675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
8549	18420	28690	4.55	2.0E-26	AI801412.1	EST_HUMAN	tc89a01.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2185416 3' similar to contains Alu repetitive element; contains element MER20 MER20 repetitive element;
8720	18537		1.82	2.0E-26	AF055086.1	NT	Homo sapiens MHC class 1 region
9252	18982		2.19	2.0E-26	AB037859.1	NT	Homo sapiens mRNA for KIAA1438 protein, partial cds
132	10106	19627	2.36	1.0E-26	BE170371.1	EST_HUMAN	QV4-HT0538-020300-123-a02 HT0538 Homo sapiens cDNA
2001	11894	21786	1.39	1.0E-26	AL039363.2	EST_HUMAN	DKFZp434H1910_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434H1910 5'
2516	12390	22282	0.84	1.0E-26	BE814995.1	EST_HUMAN	MR2-BN0114-240500-030-g07 BN0114 Homo sapiens cDNA
2654	12521		16.79	1.0E-26	AF261085.1	NT	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GADPH) mRNA, complete cds

Page 189 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6089	16034		2.75	1.0E-26	BE165980.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
8266	18146		3.17	1.0E-26	AL038487.1	EST_HUMAN	DKFZp566C2146_r1 566 (synonym: htkd2) Homo sapiens cDNA clone DKFZp566C2146 5'
9493	19737		1.84	1.0E-26	H55093.1	EST_HUMAN	CHR220032 Chromosome 22 exon Homo sapiens cDNA clone C22_45 5'
7364	17342		3.11	9.0E-27	U93163.1	NT	Homo sapiens MAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds
8027	19470	28118	3.48	9.0E-27	P54296	SWISSPROT	MYOMESIN 2 (M-PROTEIN) (165 KD TITIN-ASSOCIATED PROTEIN) (165 KD CONNECTIN-ASSOCIATED PROTEIN)
9013	18812		3.97	9.0E-27	BF445556.1	EST_HUMAN	naa03c07.x1 NCL_CGAP_P128 Homo sapiens cDNA clone IMAGE:3253644 3' similar to contains OFR.t1 OFR repetitive element;
10	9996	19787	3.09	8.0E-27	AI831462.1	EST_HUMAN	wj49c04.x1 NCL_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406150 3' similar to contains THR.b2 THR repetitive element;
545	10486		4.13	8.0E-27	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
1395	11300	21158	18.87	8.0E-27	AW162737.1	EST_HUMAN	au87h08.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783295 3' similar to gb:K00558 TUBULIN ALPHA-1 CHAIN (HUMAN);
1395	11300	21159	18.87	8.0E-27	AW162737.1	EST_HUMAN	au87h08.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783295 3' similar to gb:K00558 TUBULIN ALPHA-1 CHAIN (HUMAN);
2121	12009	21909	0.98	8.0E-27	AW864776.1	EST_HUMAN	PM2-SN0018-220300-002-a07 SN0018 Homo sapiens cDNA
3148	13073	22874	3.31	8.0E-27	P12236	SWISSPROT	ADP.ATP CARRIER PROTEIN, LIVER ISOFORM T2 (ADP/ATP TRANSLOCASE 3) (ADENINE NUCLEOTIDE TRANSLOCATOR 3) (ANT 3)
3309	13230	23035	0.91	8.0E-27	AF181897.1	NT	Homo sapiens WRN (WRN) gene, complete cds
6165	15122		3.12	8.0E-27	BE926550.1	EST_HUMAN	MR4-BT0398-250800-204-d06 BT0398 Homo sapiens cDNA
6196	15956	26088	4	8.0E-27	N84970.1	EST_HUMAN	J1751F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone J1751 5' similar to REPETITIVE ELEMENT L1
7310	17186	27386	1.68	8.0E-27	AW857579.1	EST_HUMAN	CM1-CT0315-091299-063-d07 CT0315 Homo sapiens cDNA
7310	17186	27387	1.68	8.0E-27	AW857579.1	EST_HUMAN	CM1-CT0315-091299-063-d07 CT0315 Homo sapiens cDNA
668	10602		1.22	7.0E-27	Z70664.1	NT	Human endogenous retroviral element Hc2
5023	14896		2.09	7.0E-27	AW629172.1	EST_HUMAN	hi51h12.x1 Soares_NFL_T_CBC_S1 Homo sapiens cDNA clone IMAGE:2975879 3' similar to TR:O76040 O76040 ORF2: FUNCTION UNKNOWN;
8132	18020		4.22	7.0E-27	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
9631	19204		2.07	7.0E-27	AV723365.1	EST_HUMAN	AV723365 HTB Homo sapiens cDNA clone HTBAHE02 5'
8109	17989	28246	6.21	6.0E-27	M26697.1	NT	Human nucleolar protein (B23) mRNA, complete cds
7877	17727	27970	2.92	5.0E-27	BF666614.1	EST_HUMAN	602121491F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4278527 5'
7877	17727	27971	2.92	5.0E-27	BF666614.1	EST_HUMAN	602121491F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4278527 5'
6046	15949	26080	1.54	4.0E-27	9910569	NT	Mus musculus sperm tail associated protein (Stap), mRNA

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6656	16536		1.23	4.0E-27	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
8880	18692	28985	2.56	4.0E-27	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
1995	11889	21782	5.42	3.0E-27	X60658.1	NT	R.rattus RYA3 mRNA for a potential ligand-binding protein
4174	14074	23849	1.27	3.0E-27	BE071924.1	EST_HUMAN	PMO-BT0527-090100-001-d11 BT0527 Homo sapiens cDNA
5278	15200	24976	5.13	3.0E-27	AA077705.1	EST_HUMAN	7B44C08 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B44C08
7365	17343	27549	2.98	3.0E-27	BF035327.1	EST_HUMAN	60145853F1 NIH_MGC 66 Homo sapiens cDNA clone IMAGE:3862086 5'
36	10023	19820	7.96	2.0E-27	AF084187.1	NT	Homo sapiens alpha NAC mRNA, complete cds
1853	11749		18.58	2.0E-27	AA665345.1	EST_HUMAN	nk01b10.s1 NCI_CGAP_P111 Homo sapiens cDNA clone IMAGE:1000699 similar to gb:M17886 60S
3071	12998		10.27	2.0E-27	AW629172.1	EST_HUMAN	ACIDIC RIBOSOMAL PROTEIN P1 (HUMAN); h151h12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2975879 3' similar to TR:O76040
3187	13112	22916	1.43	2.0E-27	AF111167.2	NT	O76040 ORF2: FUNCTION UNKNOWN. ; Homo sapiens jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
3187	13112	22917	1.43	2.0E-27	AF111167.2	NT	Homo sapiens jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
3944	13852	23627	1.09	2.0E-27	AF000368.1	NT	Rattus norvegicus voltage-gated sodium channel mRNA, complete cds
6712	16592	26780	1.5	2.0E-27	A1866347.1	EST_HUMAN	w128g07.x1 NCI_CGAP_U1 Homo sapiens cDNA clone IMAGE:2426268 3'
7338	17206		2.3	2.0E-27	AA551527.1	EST_HUMAN	nk08h05.s1 NCI_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:943737 similar to contains L1.13 L1 repetitive element ;
7768	17618	27847	1.22	2.0E-27	M78590.1	EST_HUMAN	EST00738 Fetal brain, Stratagene (cat#936206) Homo sapiens cDNA clone HFBCF07
7768	17618	27848	1.22	2.0E-27	M78590.1	EST_HUMAN	EST00738 Fetal brain, Stratagene (cat#936206) Homo sapiens cDNA clone HFBCF07
8324	18201	28450	2.89	2.0E-27	AU121685.1	EST_HUMAN	AU121685 MAMMA1 Homo sapiens cDNA clone MAMMA1000746 5'
8778	11749		20.82	2.0E-27	AA555345.1	EST_HUMAN	nk01b10.s1 NCI_CGAP_P111 Homo sapiens cDNA clone IMAGE:1000699 similar to gb:M17886 60S
429	10374		1.56	1.0E-27	AL163246.2	NT	ACIDIC RIBOSOMAL PROTEIN P1 (HUMAN); Homo sapiens chromosome 21 segment HS21C046
980	10903	20749	1.41	1.0E-27	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
5943	15848	25972	6.31	1.0E-27	6005855	NT	Homo sapiens Retina-derived POU-domain factor-1 (RPF-1), mRNA
6105	15999	26136	2.2	1.0E-27	F30158.1	EST_HUMAN	HSPD20461 HM3 Homo sapiens cDNA clone s4000095C10
6105	15999	26137	2.2	1.0E-27	F30158.1	EST_HUMAN	HSPD20461 HM3 Homo sapiens cDNA clone s4000095C10
7005	16882	27075	1.72	1.0E-27	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
7194	17071		1.89	1.0E-27	BE079780.1	EST_HUMAN	RC6-BT0627-140200-011-E06 BT0627 Homo sapiens cDNA
7606	17457	27672	2.68	1.0E-27	D87449.1	NT	Human mRNA for KIAA0260 gene, partial cds
8943	18751	29046	3.14	1.0E-27	AF111093.1	NT	Bos taurus latrophilin 3 splice variant bbah mRNA, complete cds

Page 191 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
136	10109		2.32	9.0E-28	BE348399.1	EST_HUMAN	hw17c11.x1 NCL CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3183188 3' similar to TR:Q07314 Q07314
308	10270	20089	3.01	9.0E-28	AU126260.1	EST_HUMAN	SECRETED NEUREXIN III-ALPHA-C PRECURSOR. [3] TR:Q07280 TR:Q07313 ;
5118	14986	24760	1.21	9.0E-28	AI590115.1	EST_HUMAN	AU126260 NT2RP1 Homo sapiens cDNA clone NT2RP1000443 5'
5118	14986	24761	1.21	9.0E-28	AI590115.1	EST_HUMAN	to12b09.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2178809 3' similar to contains OFR.t1 OFR
9093	18965		3.74	9.0E-28	BF377859.1	EST_HUMAN	repetitive element ;
9418	19592		1.97	8.0E-28	AW157574.1	EST_HUMAN	to12b09.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2178809 3' similar to contains OFR.t1 OFR
1164	11077	20922	7.54	7.0E-28	AU142750.1	EST_HUMAN	CM2-TN0140-070900-372-g01 TN0140 Homo sapiens cDNA
8523	18395	28660	2.54	7.0E-28	AV735348.1	EST_HUMAN	eu83108.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782911 3' similar to
9053	18836		1.44	7.0E-28	AV735348.1	EST_HUMAN	TR:O60302 O60302 KIAA0555 PROTEIN. ,contains element MER22 repetitive element ;
3987	13894	23670	1.27	6.0E-28	AB020673.1	NT	AU142750 Y79AA1 Homo sapiens cDNA clone Y79AA1000824 5'
3987	13894	23671	1.27	6.0E-28	AB020673.1	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
9673	19232		2.73	6.0E-28	AA504562.1	EST_HUMAN	AV735348 CB Homo sapiens cDNA clone CBFACA12 5'
315	10277		3.08	5.0E-28	AI921003.1	EST_HUMAN	Homo sapiens mRNA for KIAA0366 protein, complete cds
3927	13836	23616	1.85	5.0E-28	R79762.1	EST_HUMAN	Homo sapiens mRNA for KIAA0866 protein, complete cds
2584	12455	22347	1.42	4.0E-28	AW195066.1	EST_HUMAN	aa0603.r1 NCL CGAP_GCB1 Homo sapiens cDNA clone IMAGE:825340 5' similar to contains Alu
3070	12997	22788	3.39	4.0E-28	BE409100.1	EST_HUMAN	repetitive element;containing element PTR5 repetitive element ;
6336	16199	26359	1.59	4.0E-28	AI198941.1	EST_HUMAN	wo18c07.x1 NCL CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2455692 3' similar to contains THR.b1
8239	18119		4.29	4.0E-28	AF029308.1	NT	THR repetitive element ;
8371	18248		53.6	4.0E-28	AB038241.1	NT	y89f10.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:146443 5'
8388	16199	26359	2.94	4.0E-28	AI198941.1	EST_HUMAN	xn33c09.x1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2695504 3' similar to SW:GG95_HUMAN
1262	11169		1.89	3.0E-28	AF155382.1	NT	Q08379 GOLGIN-95. ;
7124	17001	27193	2.19	3.0E-28	BF354030.1	EST_HUMAN	601300703F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635305 5'
8306	18183	28430	1.84	3.0E-28	U53588.1	NT	qf66f10.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1755019 3' similar to gb:M19503 LINE-1
							REVERSE TRANSCRIPTASE HOMOLOG (HUMAN);
							Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and trypsinogen gene families
							Felis catus GAPDH mRNA for glyceraldehyde-3-phosphate dehydrogenase, complete cds
							qf66f10.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1755019 3' similar to gb:M19503 LINE-1
							REVERSE TRANSCRIPTASE HOMOLOG (HUMAN);
							Homo sapiens metalloprotease-like, disintegrin-like, cysteine-rich protein 2 epsilon (ADAM22) mRNA,
							complete cds
							MIR3-H10713-280500-013-109 H10713 Homo sapiens cDNA
							Homo sapiens MHC class 1 region

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9489	19106		2.44	3.0E-28	A1831991.1	EST_HUMAN	wj98f07.x1 NCI_CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2410885 3' similar to contains Alu repetitive element; contains element HGR repetitive element ;
83	10067	19894	6.45	2.0E-28	BE062167.1	EST_HUMAN	RC1-BT0254-220300-019-c05 BT0254 Homo sapiens cDNA
1149	11062	20905	10	2.0E-28	Y11107.3	NT	Homo sapiens ITGB4 gene for integrin beta 4 subunit, exons 3-41
2427	12304	22200	2.1	2.0E-28	A1348634.1	EST_HUMAN	qc35b06.x1 NCI_CGAP_Lu6 Homo sapiens cDNA clone IMAGE:1910483 3' similar to contains L1.b2 L1 repetitive element ;
5821	15727		4.28	2.0E-28	BF212905.1	EST_HUMAN	601814196F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4048751 5'
7528	17379		5.86	2.0E-28	AW972305.1	EST_HUMAN	EST384394 IMAGE resequences, MAGI Homo sapiens cDNA
8887	18698	28992	2.27	2.0E-28	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
1463	11368	21233	2.42	1.0E-28	D38044.1	NT	Human gene for Ah-receptor, exon 7-9
2173	12060	21963	1.55	1.0E-28	BF333236.1	EST_HUMAN	QV1-BT0821-120900-360-b03 BT0821 Homo sapiens cDNA
2650	12517	22407	1.03	1.0E-28	AF000995.1	NT	Homo sapiens ubiquitin TPR motif, Y isoform (UTY) mRNA, alternative transcript 2, complete cds
6587	16467		4.48	1.0E-28	11429885	NT	Homo sapiens similar to ribosomal protein L12 (H. sapiens) (LOC63091), mRNA
6675	16555		3.02	1.0E-28	8922793	NT	Homo sapiens hypothetical protein FLJ10968 (FLJ10968), mRNA
7346	17214	27413	2.63	1.0E-28	AA308744.1	EST_HUMAN	EST179615 HCC cell line (metastasis to liver in mouse) II Homo sapiens cDNA 5' end similar to similar to retroviral LTR
7678	17528	27753	5.15	1.0E-28	4758431	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
7678	17528	27754	5.15	1.0E-28	4758431	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
9058	18840		3.95	1.0E-28	AA054182.1	EST_HUMAN	z51c01.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:380448 5'
9797	19485		1.43	1.0E-28	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
9892	19691	24896	2.6	9.0E-29	AW663987.1	EST_HUMAN	h176g06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2978266 3'
9585	19169		2.92	8.0E-29	Q00130	SWISSPROT	HYPOTHETICAL GENE 50 PROTEIN
1584	11488	21349	0.91	7.0E-29	AW966447.1	EST_HUMAN	EST378521 IMAGE resequences, MAGI Homo sapiens cDNA
9942	19410		5.08	7.0E-29	AJ132352.1	NT	Rattus norvegicus mRNA for 45 kDa secretory protein, partial
580	10518	20325	6.52	6.0E-29	A1936748.1	EST_HUMAN	wp69b01.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2466985 3' similar to TR:O15475
9353	19028		3.88	6.0E-29	BE940436.1	EST_HUMAN	O15475 UNNAMED HERV-H PROTEIN ; contains LTR7.b1 LTR7 repetitive element ;
9438	19076		1.86	6.0E-29	BF568097.1	EST_HUMAN	RC3-UT0062-210800-021-c05 UT0062 Homo sapiens cDNA
4928	14807		0.98	5.0E-29	AL163203.2	NT	602184092F1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300079 5'
7068	16945		7.61	5.0E-29	AW887541.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003
						EST_HUMAN	RC3-OT0091-170300-011-c12 OT0091 Homo sapiens cDNA
3194	13119		1.68	4.0E-29	A1752367.1	EST_HUMAN	cn15c02.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn15c02 random
5656	15568		6.65	4.0E-29	BE164930.1	EST_HUMAN	QV1-HT0471-280300-121-a05 HT0471 Homo sapiens cDNA

Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7079	16956	27149	4.71	4.0E-29	J04988.1	NT	Human 90 kD heat shock protein gene, complete cds
4317	14214	23997	1.45	3.0E-29	AB042297.1	NT	Homo sapiens PTS gene for 6-pyruvoyltetrahydropterin synthase, complete cds
4626	14514	24305	1.31	3.0E-29	BF333236.1	EST_HUMAN	QV1-BT0821-120900-360-b03 BT0821 Homo sapiens cDNA
7070	16947	27138	2.07	3.0E-29	D38044.1	NT	Human gene for Ah-receptor, exon 7-9
7362	17229	27429	1.6	3.0E-29	AW303317.1	EST_HUMAN	xv17f03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2813405 3' similar to contains Alu repetitive element; contains MER19 t2 MER19 repetitive element ;
7492	17362		1.64	3.0E-29	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8591	18459	28728	2.22	3.0E-29	AA403053.1	EST_HUMAN	z62b01.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:726889 5' similar to TR:G1335769
9248	18959		1.51	3.0E-29	D63882.1	NT	G1335769 GAG-POL POLYPYRROLINE ;
484	10427	20240	1.43	2.0E-29	AF094869.1	NT	Human HsLIM15 mRNA for HsLim15, complete cds
484	10427	20241	1.43	2.0E-29	AF094869.1	NT	Homo sapiens envelope protein RIC-6 (env) gene, complete cds
1516	11421	21278	6.12	2.0E-29	A1963604.1	EST_HUMAN	Homo sapiens envelope protein RIC-6 (env) gene, complete cds
1516	11421	21279	6.12	2.0E-29	A1963604.1	EST_HUMAN	wr65d10.x1 NCL_CGAP_Ut1 Homo sapiens cDNA clone IMAGE:2492563 3' similar to TR:O15546 O15546
4182	14082	23855	2.03	2.0E-29	AL163268.2	NT	HERV-E ENVELOPE GLYCOPROTEIN ;
5750	15658	25765	1.43	2.0E-29	A1806418.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C068
6461	15658	25765	1.43	2.0E-29	A1806418.1	EST_HUMAN	wf27g07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2356860 3' similar to contains element MER6 repetitive element ;
7474	17334	27539	2.95	2.0E-29	AL163248.2	NT	wf27g07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2356860 3' similar to contains element MER6 repetitive element ;
7474	17334	27540	2.95	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
7879	17729	27973	3.39	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
7879	17729	27974	3.39	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
8804	18618		1.96	2.0E-29	AW880701.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C027
9004	18807		1.73	2.0E-29	AL163227.2	NT	QV0-O10032-080300-155-d01 OT0032 Homo sapiens cDNA
7105	16982	27174	5.41	1.0E-29	AW983880.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C027
5966	15871	25995	3.04	9.0E-30	AA761215.1	EST_HUMAN	RC1-HN0003-220300-021-b04 HN0003 Homo sapiens cDNA
9132	18889		1.5	9.0E-30	11422745	NT	n220c07.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1288332 3' similar to contains MER4.b1
5815	15721		8.81	8.0E-30	F08688.1	EST_HUMAN	MER4 repetitive element ;
6812	16691	26880	3.37	8.0E-30	AA383873.1	EST_HUMAN	Homo sapiens zinc/ferritin regulated transporter-like (ZIRTL), mRNA
7039	16916	27105	3.53	8.0E-30	A1557072.1	EST_HUMAN	HSC23F051 normalized infant brain cDNA Homo sapiens cDNA clone c-23f05
							EST97317 Thymus I Homo sapiens cDNA 5' end similar to EST containing O family repeat
							PT2.1_13_B11.r tumor2 Homo sapiens cDNA 3'

Table 4
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1499	11403		1.16	7.0E-30	BE091133.1	EST_HUMAN	PMA-BT0724-150400-004-d11 BT0724 Homo sapiens cDNA
1549	11454		0.95	6.0E-30	X51755.1	NT	Human lambda-immunoglobulin constant region complex (germline)
1736	11637	21505	1.26	6.0E-30	D25303.1	NT	Human mRNA for integrin alpha subunit, complete cds
3163	13078	22878	2.41	6.0E-30	BE008026.1	EST_HUMAN	QV0-BN0147-280400-214-f12 BN0147 Homo sapiens cDNA
9915	11454		3.15	6.0E-30	X51755.1	NT	Human lambda-immunoglobulin constant region complex (germline)
3931	13840	23620	31.23	5.0E-30	AI399992.1	EST_HUMAN	tg92g03.x1 NCL_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2116276 3' similar to contains Alu repetitive element;
5205	19522		7.35	5.0E-30	U87931.1	NT	Human aconitase hydratase (ACO2) gene, exon 7
8261	18141		3.55	5.0E-30	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
8495	18368	28632	6.68	5.0E-30	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
8495	18368	28633	6.68	5.0E-30	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
2096	11985	21880	1.64	4.0E-30	AW937471.1	EST_HUMAN	QV3-DT0043-090200-080-c06 DT0043 Homo sapiens cDNA
2096	11985	21881	1.64	4.0E-30	AW937471.1	EST_HUMAN	QV3-DT0043-090200-080-c06 DT0043 Homo sapiens cDNA
7162	17039	27231	1.49	4.0E-30	AW812488.1	EST_HUMAN	CM1-ST0181-091199-035-f08 ST0181 Homo sapiens cDNA
1134	11048		1.71	3.0E-30	AI338551.1	EST_HUMAN	qq93c05.x1 Soares total_fetus Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1938920 3' similar to contains MER29.b2 MER29 repetitive element;
3697	13611	23395	0.91	3.0E-30	AF128893.1	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-6
8538	18410	28675	2.38	3.0E-30	P34056	SWISSPROT	TRANSCRIPTION FACTOR AP-2
659	10593	20411	1.18	2.0E-30	AW857315.1	EST_HUMAN	CM0-CT0307-310100-158-h03 CT0307 Homo sapiens cDNA
1068	10984		2.32	2.0E-30	F08688.1	EST_HUMAN	HSC23F051 normalized infant brain cDNA Homo sapiens cDNA clone c-23f05
1464	11369	21234	5.91	2.0E-30	BE178877.1	EST_HUMAN	RC5-HT0582-110400-013-H08 HT0582 Homo sapiens cDNA
2683	12548	22438	10.97	2.0E-30	BE765232.1	EST_HUMAN	IL2-NT0101-280700-116-E04 NT0101 Homo sapiens cDNA
2889	12816	22609	6.38	2.0E-30	AF114156.1	NT	Homo sapiens Y-linked zinc finger protein (ZFY) gene, complete cds
3721	13633	23419	2.11	2.0E-30	AW206581.1	EST_HUMAN	UI-H-BI1-af0-c-12-0-UI.s1 NCL_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2722568 3'
4668	14554	24346	1.72	2.0E-30	BE298945.1	EST_HUMAN	601119660F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3029438 5'
4668	14554	24347	1.72	2.0E-30	BE298945.1	EST_HUMAN	601119660F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3029438 5'
6966	16844	27036	3.46	2.0E-30	C18939.1	EST_HUMAN	C18939 Human placenta cDNA (Tfujiwara) Homo sapiens cDNA clone GEN-570C01 5'
7019	18896	27085	1.55	2.0E-30	BE670617.1	EST_HUMAN	7e37c12.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3284662 3' similar to SW:DHSA_HUMAN P31040 SUCCINATE DEHYDROGENASE [UBIQUINONE] FLAVOPROTEIN SUBUNIT PRECURSOR;
7019	16896	27086	1.55	2.0E-30	BE670617.1	EST_HUMAN	7e37c12.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3284662 3' similar to SW:DHSA_HUMAN P31040 SUCCINATE DEHYDROGENASE [UBIQUINONE] FLAVOPROTEIN SUBUNIT PRECURSOR;
7743	17593	27814	3.3	2.0E-30	AW971588.1	EST_HUMAN	EST383657 IMAGE resequences, MAGL Homo sapiens cDNA

Page 195 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7802	17652	27899	4.47	2.0E-30	AW470791.1	EST_HUMAN	ha33d06.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2875499 3' similar to contains THR.b3
284	10249	20069	10.22	1.0E-30	C18939.1	EST_HUMAN	THR repetitive element ;
527	10469	20281	1.6	1.0E-30	AW468897.1	EST_HUMAN	C18939 Human placenta cDNA (TFujiwara) Homo sapiens cDNA clone GEN-570C01 5'
699	10632	20457	2.92	1.0E-30	AL163203.2	NT	hd30b04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:888599 3'
2165	12052	21953	3.24	1.0E-30	AA664377.1	EST_HUMAN	MER1.13 MER1 MER1 repetitive element ;
2413	12290	22187	2.57	1.0E-30	BF347728.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003
2973	12900	22699	1.03	1.0E-30	5803091	NT	ac77b08.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:888599 3'
3015	12943	22736	0.93	1.0E-30	AA315045.1	EST_HUMAN	602022560F1 NCI_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4157991 5'
6545	16403	26582	2.32	1.0E-30	BF183230.1	EST_HUMAN	Homo sapiens methionine aminopeptidase, aIF-2-associated p87 (MNPEP), mRNA
9733	19615		5.1	1.0E-30	H55593.1	EST_HUMAN	EST186868 HCC cell line (metastasis to liver in mouse) II Homo sapiens cDNA 5' end
7013	16890		2.04	9.0E-31	Z38293.1	EST_HUMAN	601809932F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:4040694 5'
1060	10977	20820	1.64	8.0E-31	8923389	NT	CHR220532 Chromosome 22 exon Homo sapiens cDNA clone C22_728 5'
2362	12242		5.14	8.0E-31	AL163208.2	NT	HSC05F032 normalized infant brain cDNA Homo sapiens cDNA clone c-05f03 3'
694	10627		1.72	7.0E-31	AA372637.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ20420 (FLJ20420), mRNA
2633	12500	22392	1.7	7.0E-31	BE326517.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C008
2633	12500	22393	1.7	7.0E-31	BE326517.1	EST_HUMAN	EST84555 Colon adenocarcinoma IV Homo sapiens cDNA 5' end
9583	19168	25272	2.56	7.0E-31	X51755.1	NT	hw05a11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3182012 3'
3625	13539		2.79	6.0E-31	AF223391.1	NT	hw05a11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3182012 3'
6739	16618		3.68	6.0E-31	AF055066.1	NT	Human lambda-immunoglobulin constant region complex (germline)
8120	18008	28255	2.11	6.0E-31	AU119105.1	EST_HUMAN	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
9191	18926	25351	1.88	6.0E-31	AW372868.1	EST_HUMAN	Homo sapiens MHC class 1 region
9319	19541		1.78	6.0E-31	BE894488.1	EST_HUMAN	AU119105 HEMBA1 Homo sapiens cDNA clone HEMBA1005050 5'
185	10157	19973	2.85	5.0E-31	M60694.1	NT	RC5-BT0377-091299-031-D12 BT0377 Homo sapiens cDNA
185	10157	19974	2.85	5.0E-31	M60694.1	NT	601433087F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918524 5'
6915	16793		1.21	5.0E-31	BF056540.1	EST_HUMAN	Homo sapiens type I DNA topoisomerase gene, exon 8
581	10519		3.78	4.0E-31	AJ271735.1	NT	Homo sapiens type I DNA topoisomerase gene, exon 8
1594	11498	21357	1.04	4.0E-31	Q10473	SWISSPROT	706704.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:3443479 3' similar to TR:Q13537 Q13537
1775	11674		2.59	4.0E-31	AL163280.2	NT	SIMILAR TO POGO ELEMENT ; contains L1.1 L1 repetitive element ;
							Homo sapiens Xq pseudautosomal region; segment 1/2
							POLYPEPTIDE N-ACETYL GALACTOSAMINYL TRANSFERASE (PROTEIN-UDP
							ACETYL GALACTOSAMINYL TRANSFERASE) (UDP-GALNAc:POLYPEPTIDE, N-
							ACETYL GALACTOSAMINYL TRANSFERASE) (GALNAc-T1)
							Homo sapiens chromosome 21 segment HS21C080

Page 196 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2759	12621		1.38	4.0E-31	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
9604	19186		1.52	4.0E-31	11430273	NT	Homo sapiens KIAA0569 gene product (KIAA0569) mRNA
9718	19259		1.38	4.0E-31	AB008681.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
2550	12423	22314	1.42	3.0E-31	6005871	NT	Homo sapiens SEC63, endoplasmic reticulum translocon component (S. cerevisiae) like (SEC63L), mRNA
6341	16204	26366	9.03	3.0E-31	4826853	NT	Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 8 (19kD, ASH1) (NDUFB8) mRNA
6425	16286	26448	1.38	3.0E-31	11420329	NT	Homo sapiens hypothetical protein FLJ10842 (FLJ10842), mRNA
6745	16624		1.95	3.0E-31	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
7625	17376	27585	2.86	3.0E-31	D14523.1	NT	Horse mRNA for ferritin L-chain, complete cds
8028	17920	28167	2.01	3.0E-31	P11174	SWISSPROT	40S RIBOSOMAL PROTEIN S15 (RIG PROTEIN)
8493	18366		6.36	3.0E-31	BF035327.1	EST_HUMAN	60145853.F1 NIH_MGC 66 Homo sapiens cDNA clone IMAGE:3862086 5'
1875	11771	21647	1.83	2.0E-31	AW838171.1	EST_HUMAN	QV2-L.T0051-260300-111-403 LT0051 Homo sapiens cDNA
2167	12054	21955	1.31	2.0E-31	AI93388.1	EST_HUMAN	tg44g05.x1 Scores_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2111672 3'
2292	12174	22074	2.18	2.0E-31	AL119245.1	EST_HUMAN	DKFZp761G1513_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761G1513 5'
2391	12269	22164	4.4	2.0E-31	AA458824.1	EST_HUMAN	aa88f11.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:838413 3' similar to contains THR.12 THR repetitive element ;
5502	15421	25483	3.6	2.0E-31	BE350127.1	EST_HUMAN	h09g01.x1 NCL_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3 MER29 repetitive element ;
7246	17123		1.8	2.0E-31	AA877764.1	EST_HUMAN	nr06f04.s1 NCL_CGAP_Co10 Homo sapiens cDNA clone IMAGE:1161055 3' similar to TR:Q13537 Q13537 MER37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE. ;
7309	17185	27385	3.99	2.0E-31	7661535	NT	Homo sapiens B9 protein (B9), mRNA
7700	17550	27774	1.27	2.0E-31	AV710948.1	EST_HUMAN	AV710948 Cu Homo sapiens cDNA clone CuAALB07 5'
7700	17550	27775	1.27	2.0E-31	AV710948.1	EST_HUMAN	AV710948 Cu Homo sapiens cDNA clone CuAALB07 5'
7797	17647	27883	2.17	2.0E-31	BE408611.1	EST_HUMAN	601304125F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638310 5'
7797	17647	27884	2.17	2.0E-31	BE408611.1	EST_HUMAN	601304125F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638310 5'
9292	18993		2	2.0E-31	AF148512.1	NT	Homo sapiens hexokinase II gene, promoter region
9431	19759		1.81	2.0E-31	AI114527.1	EST_HUMAN	HA1110 Human fetal liver cDNA library Homo sapiens cDNA
16	10002	19794	8.34	1.0E-31	U93163.1	NT	Homo sapiens MAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds
1640	11544	21403	2	1.0E-31	O95371	SWISSPROT	OLFACTORY RECEPTOR 2C1
1640	11544	21404	2	1.0E-31	O95371	SWISSPROT	OLFACTORY RECEPTOR 2C1
1640	11544	21405	2	1.0E-31	O95371	SWISSPROT	OLFACTORY RECEPTOR 2C1
4535	14428	24209	1.01	1.0E-31	AL134376.1	EST_HUMAN	DKFZp547B235_r1 547 (synonym: hnf1r1) Homo sapiens cDNA clone DKFZp547B235 5'

Page 197 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4535	14428	24210	1.01	1.0E-31	AL134376.1	EST_HUMAN	DKFZp647B235_r1 547 (synonym: hrb1) Homo sapiens cDNA clone DKFZp647B235 5'
5235	15159	24927	3.15	1.0E-31	AW391679.1	EST_HUMAN	MR3-ST0220-151299-028-a08_1 ST0220 Homo sapiens cDNA
5728	15635	25738	1.87	1.0E-31	AF048727.1	NT	Homo sapiens minisatellite ceb1 repeat region
8288	18167	28411	2.72	1.0E-31	AI086434.1	EST_HUMAN	q21h03.x1 NCL CGAP_Bm25 Homo sapiens cDNA clone IMAGE:1750709 3' similar to TR:Q16595
2835	12763		0.99	9.0E-32	U50871.1	NT	Q16595 FRAXIN.; Human familial Alzheimer's disease (S.TM2) gene, complete cds
6000	15905	26029	2.34	9.0E-32	AV723976.1	EST_HUMAN	AV723976 HTB Homo sapiens cDNA clone HTBAAG01 5'
2032	11923	21815	3.32	8.0E-32	AI056770.1	EST_HUMAN	oz15a09.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1675384 3'
4754	14639	24426	1.17	7.0E-32	P52591	SWISSPROT	NUCLEAR ENVELOPE PORE MEMBRANE PROTEIN POM 121 (PORE MEMBRANE PROTEIN OF 121 KD) (P145)
9268	18972		2.77	7.0E-32	X17283.1	NT	Human chromosome 22 immunoglobulin V(IK) gene, part. with 5' breakpoint between orphon and neighbouring non-amplified region
2702	12566	22456	0.9	6.0E-32	AI478104.1	EST_HUMAN	tm34a10.x1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2159994 3' similar to contains MER29.13
6359	16222		1.5	6.0E-32	BE888016.1	EST_HUMAN	MER29 repetitive element ;
1018	10936	20779	29.57	5.0E-32	AF116627.1	NT	601511530F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913087 5'
915	10839		1.74	4.0E-32	AL163246.2	NT	Homo sapiens PRO1181 mRNA, complete cds
6484	16342	26510	2.82	4.0E-32	11432574	NT	Homo sapiens chromosome 21 segment HS21C046
6484	16342	26511	2.92	4.0E-32	11432574	NT	Homo sapiens AT-binding transcription factor 1 (ATBF1), mRNA
448	10392	20213	3.4	3.0E-32	Y17293.1	NT	Homo sapiens AT-binding transcription factor 1 (ATBF1), mRNA
1438	11343	21210	7.67	3.0E-32	AV731500.1	EST_HUMAN	Homo sapiens FLI1 gene, partial
7404	17271	27477	6.73	3.0E-32	AV758634.1	EST_HUMAN	AV731500 HTF Homo sapiens cDNA clone HTFAKC07 5'
7404	17271	27478	6.73	3.0E-32	AV758634.1	EST_HUMAN	AV758634 BM Homo sapiens cDNA clone BMFBBH12 5'
8297	18176	28421	8.08	3.0E-32	AA777621.1	EST_HUMAN	AV758634 BM Homo sapiens cDNA clone BMFBBH12 5'
9294	18995		3.04	3.0E-32	BE279086.1	EST_HUMAN	z195a07.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:448500 3' similar to contains THR.13 THR repetitive element ;
9655	15090	24882	2.43	3.0E-32	5174574	NT	601156285F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139701 5'
9655	15090	24883	2.43	3.0E-32	5174574	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog), translocated to, 4 (MLLT4) mRNA
9802	19314		4.94	3.0E-32	BE279086.1	EST_HUMAN	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog), translocated to, 4 (MLLT4) mRNA
4783	14667	24454	0.91	2.0E-32	BE298613.1	EST_HUMAN	601156285F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139701 5'
5900	15806	25929	19.01	2.0E-32	Z38133.1	NT	601173631F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3529159 5'
5900	15806	25930	19.01	2.0E-32	Z38133.1	NT	H.sapiens mRNA for myosin
							H.sapiens mRNA for myosin

Page 198 of 413
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6815	16894	26884	3.41	2.0E-32	AA114294.1	EST_HUMAN	zn66c08.r1 Stragene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:563150 5'
6815	16894	26885	3.41	2.0E-32	AA114294.1	EST_HUMAN	zn66c08.r1 Stragene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:563150 5'
9908	19385	25175	1.61	2.0E-32	AV736449.1	EST_HUMAN	AV736449 CB Homo sapiens cDNA clone CBFBI08 5'
9908	19385	25176	1.61	2.0E-32	AV736449.1	EST_HUMAN	AV736449 CB Homo sapiens cDNA clone CBFBI08 5'
3055	12982		1.06	1.0E-32	BE743299.1	EST_HUMAN	601573207F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3834433 5'
6198	15958	26090	7.04	1.0E-32	11439789	NT	Homo sapiens chromosome 11 open reading frame 9 (C11ORF9), mRNA
6997	16874	27065	5.18	1.0E-32	AA720574.1	EST_HUMAN	nm21g02.s1 NCI_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains THR.13
3435	13352		4.98	9.0E-33	BE327112.1	EST_HUMAN	THR repetitive element ;
5967	15773		4.19	9.0E-33	AF223391.1	NT	hw07c05.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3182216 3' similar to TR:O88539 O88539
7103	16980	27172	1.99	9.0E-33	BF347228.1	EST_HUMAN	WW DOMAIN BINDING PROTEIN 11. ;
8177	18065		5.89	9.0E-33	AL163280.2	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
54	10041	19850	2.06	7.0E-33	5031736	NT	602021164F1 NCI_CGAP_Bm87 Homo sapiens cDNA clone IMAGE:4156670 5'
54	10041	19851	2.06	7.0E-33	5031736	NT	Homo sapiens chromosome 21 segment HS21C080
2115	12004	21902	2.71	7.0E-33	AI590115.1	EST_HUMAN	Homo sapiens short-chain alcohol dehydrogenase family member (HEP27) mRNA
2612	12480		8.4	7.0E-33	AV730056.1	EST_HUMAN	Homo sapiens short-chain alcohol dehydrogenase family member (HEP27) mRNA
2800	11573	21439	1.78	7.0E-33	AV730015.1	EST_HUMAN	for12b09.x1 NCI_CGAP_U2 Homo sapiens cDNA clone IMAGE:2178809 3' similar to contains OFR.t1 OFR
3204	13128		12.85	7.0E-33	AW971307.1	EST_HUMAN	repetitive element ;
8203	18087	28338	3.9	7.0E-33	BF347229.1	EST_HUMAN	AV730056 HTF Homo sapiens cDNA clone HTFAVE06 5'
8573	18441	28709	2.15	7.0E-33	AW971568.1	EST_HUMAN	AV730015 HTF Homo sapiens cDNA clone HTFANF08 5'
9274	18978	25322	3.43	7.0E-33	AA601416.1	EST_HUMAN	EST383396 MAGL Homo sapiens cDNA clone IMAGE:4156670 5'
3676	13590		0.85	6.0E-33	AL163285.2	NT	602021164F1 NCI_CGAP_Bm87 Homo sapiens cDNA clone IMAGE:4156670 5'
6988	16865	27059	13.52	6.0E-33	JO4038.1	NT	EST3833657 MAGL Homo sapiens cDNA clone IMAGE:4156670 5'
7049	16926	27117	2.57	6.0E-33	11429198	NT	EST3833657 MAGL Homo sapiens cDNA clone IMAGE:4156670 5'
7750	17600	27822	1.24	6.0E-33	6755609	NT	not16h01.s1 NCI_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100881 3' similar to contains L1.t1 L1
7750	17600	27823	1.24	6.0E-33	6755609	NT	repetitive element ;
1739	11640		1.78	5.0E-33	BF373515.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C085
1838	11735		1.18	5.0E-33	11141884	NT	Homo sapiens chromosome 21 segment HS21C085
1856	11752	21626	1.37	5.0E-33	4507208	NT	Human glyceraldehyde-3-phosphate dehydrogenase (GAPDH) gene, complete cds
1856	11752	21627	1.37	5.0E-33	4507208	NT	Homo sapiens similar to RAD23 (S. cerevisiae) homolog B (H. sapiens) (LOC63277), mRNA
			1.24	6.0E-33	6755609	NT	Mus musculus SRY-box containing gene 6 (Sox6), mRNA
			1.24	6.0E-33	6755609	NT	Mus musculus SRY-box containing gene 6 (Sox6), mRNA
			1.78	5.0E-33	BF373515.1	EST_HUMAN	Mus musculus SRY-box containing gene 6 (Sox6), mRNA
			1.18	5.0E-33	11141884	NT	QV1-FT0169-100700-271-a02 F10169 Homo sapiens cDNA
			1.37	5.0E-33	4507208	NT	Homo sapiens solute carrier family 5 (choline transporter), member 7 (SLC5A7), mRNA
			1.37	5.0E-33	4507208	NT	Homo sapiens spermidine synthase (SRM) mRNA
			1.37	5.0E-33	4507208	NT	Homo sapiens spermidine synthase (SRM) mRNA

Page 199 of 413
Table 4
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2226	12111		1.3	5.0E-33	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
9082	18858		1.62	5.0E-33	11433063	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A), mRNA
1112	11027		3.28	4.0E-33	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
2078	11968	21861	1.77	4.0E-33	4758987	NT	Homo sapiens RAB1, member RAS oncogene family (RAB1) mRNA
2370	12250		7.39	4.0E-33	AA626621.1	EST_HUMAN	ab51b11.1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844317 5' similar to contains Alu repetitive element; contains MER28.b2 MER28 repetitive element ;
2498	12373	22265	3.77	4.0E-33	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4382	14278	24057	1.63	4.0E-33	AW293349.1	EST_HUMAN	UI-H-B12-ahl-c-03-0-J1.s1 NCL CGAP_Sub4 Homo sapiens cDNA clone IMAGE:2727149 3'
5318	15239	25043	20.94	4.0E-33	AA053053.1	EST_HUMAN	z171a08.1 Stratagene colon (#937204) Homo sapiens cDNA clone IMAGE:510038 5' similar to gb:X12671_ma1 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A1 (HUMAN);
9007	18810	29102	1.72	4.0E-33	11425635	NT	Homo sapiens killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1 (KIR3DL1), mRNA
1073	10989		4.46	3.0E-33	BE350127.1	EST_HUMAN	h109g01.x1 NCL CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3
1074	10989		3.4	3.0E-33	BE350127.1	EST_HUMAN	MER29 repetitive element ;
2400	12721		1.48	3.0E-33	AV647851.1	EST_HUMAN	h109g01.x1 NCL CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3
99	10003		2.33	2.0E-33	AI160189.1	EST_HUMAN	MER29 repetitive element ;
4322	14219		4.27	2.0E-33	BE159039.1	EST_HUMAN	AV647851 GLC Homo sapiens cDNA clone GLOBCE09 3'
4911	14790	24565	5.1	2.0E-33	AA626683.1	EST_HUMAN	qb67g03.x1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:1705204 3' similar to contains OFR.11 OFR repetitive element ;
5026	14899	24668	1.73	2.0E-33	11421332	NT	MIR0-HT0405-160300-202-d08 HT0405 Homo sapiens cDNA
5026	14899	24669	1.73	2.0E-33	11421332	NT	ab51g11.1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844388 5' similar to gb:X00734_cds1 TUBULIN BETA-5 CHAIN (HUMAN);
5869	15775	25894	1.61	2.0E-33	AI277492.1	EST_HUMAN	Homo sapiens hypothetical protein SIRP-b2 (SIRP-b2), mRNA
7261	17138		1.8	2.0E-33	AI052256.1	EST_HUMAN	Homo sapiens hypothetical protein SIRP-b2 (SIRP-b2), mRNA
8	9994		1.44	1.0E-33	AF003528.1	NT	ql96d01.x1 Soares_NhMMPu_S1 Homo sapiens cDNA clone IMAGE:1880161 3'
8637	18502	28778	2.02	1.0E-33	AW996818.1	EST_HUMAN	oz21d03.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1675673 3' similar to gb:M29596 TRANSLATIONAL INITIATION FACTOR 2 BETA SUBUNIT (HUMAN);
8921	18729	29024	5.33	1.0E-33	U60822.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
9553	19151		1.92	1.0E-33	AI927191.1	EST_HUMAN	QV3-BN0047-230200-102-b03 BN0047 Homo sapiens cDNA
							Human dystrophin (DMD) gene, exons 7, 8 and 9, and partial cds
							wo88c06.x1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2462410 3'